Responsiveness Summary
for
King County's West Point Wastewater Treatment Plant & CSO System
NPDES Permit Number WA-002918-1

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January 27, 2009 Hearing

DouGlas Palenshus: Mike, could you please check that microphone with your voice?

Mike Dawda: You're making me nervous.

DouGlas Palenshus: Okay. Check, check. Okay, now it's your turn and . . . Got that on—thank you. Thanks for making sure the recorder was on. This is pretty important for us here. So, as I said, I'll be starting with people in the order they signed up for public testimony for the hearing. And I'll open it up for any others. And remember one at a time questions that you ask as part of your comment are for the record. And I'd like to ask at this point—we had 5 people indicate that they wish to make a comment tonight and another 15 who indicated that perhaps they might, by indicating "maybe." Could I see now anyone who knows that they wish to make a comment, just with their show of hands please? One, two, three, four, five, six, seven. If you could, keep them up, I'm going to go back just to make sure I have the right number. One, two, three, four, five, six, seven. Okay. And is there anyone who thinks that they may still wish to, but aren't sure? Okay. Thanks very much. So that's possibly eight comments and seven for sure. And we wanted to be sure that everyone who wished to do so would have a chance to make comments. So I'm doing some quick math here—help me out if you can. Maximum of 80 minutes that we can conceivably use for this time. So with potentially 8 people, please limit your comments to 10 minutes. But I will be keeping time. And if you don't have 10 minutes of meaningful things to say, don't feel any obligation to continue speaking. And if you wish to pass, when your name comes up, we'll put you at the end. So in order of those who have indicated they wish to comment, I'm just gonna name the names. B.J. Cummings? Would you please step up to that microphone and . . . (applause)

B.J. Cummings

There we go. (laughter) I'm really much shorter than I look. Thank you. Okay. I hadn't had a chance to complete my review of the entire document this evening. And there was actually some new information that I received this evening before the presentation began. So the first thing I'd like to do is for everybody who has People For Puget Sound's Fact Sheet, which they wonderfully put together, there is a section in there on CSOs. And I take full responsibility, because it was me that gave the information to People For Puget Sound that the CSO Control Update from King County had not yet been released and I was trying to figure out how we could be looking at a new permit without a new CSO Control Plan. I'm the coordinator for the Duwamish River Cleanup Coalition. We've been discussing the pending CSO Control Plan with the County for about two years now, and it was apparently submitted to the Department of Ecology in June of last year and tonight was the first I heard about it. So that part of your Fact Sheet is incorrect. We are not still waiting for it. It was issued with no public review or notification. One thing for the Fact Sheet that you have there—given that one of the first things that I looked for when I asked tonight about this, and was shown the report that's in the binder that Mark has, there was no change, whatsoever, in the CSO Control Plan to the date for completing CSO Controls on the Duwamish River. Now, some of you probably are here for other reasons and aren't familiar with the Duwamish. It's about three blocks that way. And the Duwamish River was listed as a Federal Super Fund Site, one of the most toxic hazardous waste sites in the country that now requires cleanup. In 2001, the Duwamish River's course included in, if this is Puget Sound-wide, so it would be true everywhere, the Endangered Species Act listing for threatened salmon. And, specific to the Duwamish, the Duwamish is also now the subject of a fishing advisory. Folks should eat absolutely no resident fish, crab, shellfish from the Duwamish River because of the high levels of toxic pollution there. There's also an advisory to salmon. But, again, that one's Puget Sound-wide. So we're looking at a Super Fund Site with very severe health implications for the people who are most exposed and vulnerable in using that river for subsistence fishing. Also folks that are using it for direct contact. There are actually communities that do swim in the Duwamish, as well as on the Puget Sound beaches. And there are a lot of both environment and human health concerns that we have here. So, going back to my first point, I was dismayed to find that there is no change in this new CSO Control Plan Update. The target date for completing CSO Controls for releases to the Duwamish is still the year 2027. The Super Fund cleanup, by the way, is proceeding now. There actually have already been areas of the river that have been cleaned up. The two areas of the river where cleanup actions have been taken are at the mouth of combined sewer overflows, because those are some of the most contaminated areas on the river. The most recent cleanup was done at what's called the Duwamish Diagonal combined sewer overflow, and that particular one was re-contaminated within two years because of the ongoing releases from the CSO and storm drain system that comes out at that spot. That was a $10 million dollar cleanup project and there is more cleanup that is needed there now, because of recontamination from ongoing releases. The other thing that I do want to mention is—there was a comment in the presentation about CSOs contributing a relatively small amount of the pollution to the river, relative to other inputs. And in the permit, here, I think it says relative to up-river inputs. There's a very significant difference in terms of overall flow. There's a big difference. But what is coming out of the CSOs includes, of course, untreated domestic waste—what's coming from your toilets—it also includes a great deal of untreated or only slightly treated industrial waste. Here in the Duwamish Valley, coming down here, you couldn't have failed to realize that you were surrounded by industry. That stuff is not going to the sewage treatment plant either, during an overflow. We're talking about highly toxic material that is discharging and it is industrial process wastewater that is not getting to the sewage treatment plant, that's coming out of the CSOs into the Duwamish. So what

we would like to request is that we need a publicly-vetted CSO Control Plan as part of this permit. We need one that protects Duwamish River communities, its residents, the fishermen, kayakers, other folks that are in regular contact with both the water and the sediments of the Duwamish. And in the permit, once we have that, in the permit we also then need enforceable CSO reduction milestones specific to the Duwamish CSOs that need to be included in the permit. And, because of the King County plan that is submitted for this one, there are no compliance schedules that apply to the Duwamish CSOs, because they're too far out in the future. Thank you. (applause)

Ecology's Response to BJ Cumming's Testimony

In accordance with the permit requirements, King County submitted their 2008 CSO Control Plan Update as part of their permit renewal application. The 2008 CSO Control Plan Update was posted to the County's webpage in July 2008. Ecology notes that there was much stakeholder involvement preparing this document. Ecology sets compliance schedules in NPDES permits for 5 years or the life of the permit. Since, the Duwamish CSO reductions projects will begin in 2017, they are not included in a compliance schedule in this permit (2009-2014). According to King County staff, stakeholders have been told that the County is willing to consider schedule changes, but that they are not needed now because the County is committed to completing the Puget Sound Beaches projects in the next 5 years.

In regard to the Duwamish Waterway and control schedules, the 2008 CSO Control Plan Update states, "Many recent studies have focused on the Duwamish Waterway because of sediment cleanup projects in the area. With regard to protection of human health, information generated from the Lower Duwamish Waterway Superfund process is increasing our understanding of fish consumption and human health risk. If an ongoing human health risk from CSOs in the Duwamish Waterway is identified, King County may consider changes in the control schedule to accelerate CSO control projects at those locations. Determining remaining relative priorities of projects scheduled for completion after the Puget Sound Beach projects will be difficult because comparable information is not as available for other areas where CSOs occur, such as the Ship Canal." The 2008 CSO Control Plan further adds, "At the end of 2010, King County will complete a review of the CSO control program that incorporates information from the recalibrated hydraulic model, the review of technologies including the results of CSO treatment pilots under way, and any new environmental or public health study findings with implications for CSO control. The priorities for scheduling control projects will be reassessed in light of any new information. Project definitions and implementation order may be redefined at that time and any modifications will be sent to the King County Council for approval." In Chapter 3 of the CSO Control Plan Update, the County indicates that a review of their recent studies suggests that their long-term prioritization is appropriate. The County does note that during their program review that is due to the King County Council by the end of 2011, that the CSO reduction projects will again be reviewed in light of the most current information and will be adjusted, if warranted.

In the 2008 CSO Control Plan Update, the County has formally stated that they will re-evaluate the priority ranking of CSO control projects, including Duwamish projects. Ecology believes this is a reasonable approach. Due to the long timeframe associated with planning, modeling, designing, and constructing CSO reduction projects, it is unreasonable to put Duwamish CSO projects in a compliance schedule in this permit. Duwamish CSO control projects will be included in a compliance schedule in the next NPDES permit cycle (2014-2019).

DouGlas Palenshus: Thank you. Can someone try to get a few of these lights on please, in case our commentors need to see their notes. Sorry, I just wanted to be sure I was getting a recording and in my nervousness, I failed to do the introductory part of this series. So please allow me to do this. Let the record show that our comments started at five minutes after eight on January 27, 2009. This hearing is being held at the South Seattle Community College, 6737 Corson Avenue South, Seattle. A written notice of a hearing was published in the *Seattle Times* on December 22, 2008. Notices of the hearing were also mailed and emailed to about 320 interested people. You may have received that notice. When I call your name, please step up. So thank you. Next is Cathy Farrar and would be followed by, I think it's Richard Hart, possibly Rachel, if you wish to comment. (applause)

Cathy Farrar

I'm Cathy Farrar and I live in North Seattle. And my husband and I came tonight as concerned citizens and as members of People For Puget Sound. Also members of the Sierra Club and Conservation Northwest. And, as I said, I'm not a scientist and so I really don't know what I can contribute to this hearing. I received an education this evening. However, I also realize that we need to have outside comment on these very important issues. And so, I believe that this permitting process and the public hearing is important to encourage, to give an opportunity, as you said, to other people who do have the expertise to review these plans. And so, all I'd like to say is that I really think it is important to have people like C.J. and Heather Trim, and people who are scientists, to be able to make comments on these processes. And that I basically come to represent that need that I have as a citizen for outside review of these important plans. I used to work on the Duwamish River at the Customer Services building for Boeing. And my husband and I also take daily walks on Puget Sound near Carkeek Park. I grew up in West Seattle and I have seen, in my lifetime, the reduction of crabs, sea anemones, orcas, and salmon and I feel that the loss of all this wildlife really bodes ill for the humans. And, on the positive side, I have seen the return of ospreys and eagles, because of the banning of DDT. And I believe that the banning of DDT is similar to—the courage it took to ban DDT is similar to the courage that we are showing by showing up tonight and witnessing this hearing. So I also teach in China and I have watched—I just keep track of many different parts of the country and what's going on with the environment there, as a citizen's efforts. And what I realize is that it's much worse to have to repair damage after it's done, and that's what's being done all over the world is that—because of expedient decisions made for commercial purposes, or just because of lack of knowledge, that now there are cleanups that have to happen and that there is damage that needs repair. And so, I believe that this permit process is basically trying to prevent that type of need for a cure, or because an ounce of prevention is definitely worth a pound of cure. So that's all I have to say, and I appreciate the education, and thank you for your (unidentifiable). (applause)

Ecology's Response to Cathy Farrar's Testimony

Comments noted. The public hearing was on the Draft West Point Permit and Fact Sheet. The above comments are not specific to the draft permit and fact sheet. Like many citizens, Ecology is concerned over the health and well-being of Puget Sound, too. Due to our concern, Ecology is currently conducting a number of studies to evaluate water quality and the impact from discharges into Puget Sound.

DouGlas Palenshus: Thank you. Next on the list is Tom Ostrom??. Oh, excuse me. Tom you didn't have—you haven't indicated—it was Richard Hart, or Rachel Hart. I'm sorry. (applause)

Richard Hart

Hi. I'm Richard Hart. I just wanted to say, I was a bit shocked to learn tonight that (unidentifiable) there's not going to be a reduction in the total amount of pollutants going into the Sound if there's a population increase. Well, duh. Do you think people are going to move to the Puget Sound area? That people are gonna to have children? No, I think I'm here, because I care about the generations to come long down the road. And I'm quite dismayed at the technological aspect. I mean, I guess I feel like on one hand I don't have a right to speak, because I don't understand the same technical jargon. But I also think there's a huge moral aspect to this. I mean, you know, don't we care about the legacy that we are going to leave to our children. And that may sound a little corny. That may sound kind of stereotypical. But the purpose is to stop the pollution, not just to monitor it endlessly and to permit it. I know, I learned in '72—I was a protester in the '60s—that the EPA was passed in '72, I believe it was. And I thought, well, this will take care of things. After all, the Environmental Protection Act—it's not the Environmental Protection Act, it's the Environmental Practices Act. It sets up a process and procedure. And this permitting process is part of that. It's this little sort of due process procedure that goes on endlessly. I would really like to see Puget Sound cleaned up. And I'd to see those discharges stop. I'd like to see the political will to flow down to the technocrats that are working on this. I would hope that the technocrats would secretly be thinking of ways they could pressure their bosses so that they would actually stop the pollutants??, because I would really I like the Duwamish to be a river again, that people can engage in as if, you know, all the qualities that a river would have. So thank you. (applause)

Ecology's Response to Richard Hart's Testimony

Comments noted. The West Point permit contains mass-based limits for carbonaceous biochemical oxygen demand (CBOD) and total suspended solids (TSS). Both CBOD and TSS are indicator pollutant parameters for other pollutants. In effect, Ecology's mass-based limits put a ceiling or a cap on the total amount of pollutants that can be discharged over time, including population increases. The calculation of these mass-based limits is explained in the fact sheet and is calculated by multiplying the maximum month design flow by the pollutant concentration limit and a conversion factor. When King County reaches 85 percent of the mass limit, the County has to start planning to expand their facilities to accommodate growth. In essence, the mass-based limits and the 85 percent planning limit ensures that the level of secondary treatment will be expanded to keep up with population increases over time.

DouGlas Palenshus: Thank you. The next indication of perhaps speaking—I'm just going to have to go through these, because I don't know who it was if, (unidentifiable). Christina Gallegos?

Christina Gallegos

My name is Christina Gallegos and I represent the Community Coalition for Environmental Justice. And, by profession, I'm an environmental educator. And I am concerned that the CSOs are not being regulated and that the study that has come out from King County has not been shared with the community. I have an opportunity to touch children who live in that community at the edge of the water, but I'm afraid to take them to the edge of the water. I am afraid that our children will not have a legacy with the water if we don't change the way we are doing business. Increasing the amount of flow into Puget Sound is in direct competition against our efforts to clean up Puget Sound. Is the Department of Ecology working in a silo where they are not aware of what the rest of the community is concerned about in regards to Puget Sound? Why have we not placed a moratorium on permitting CSOs and outflow from the waste treatment plant? At

this particular time in our lives, we are trying to define and decide how we're going to clean up Puget Sound. If you're in a big tub of water and you just keep pouring in more junk and more junk, do you think that by standing—sitting in the corner you're not going to be affected by that stuff? We are affecting the lives of the people who live in this community. We are affecting the lives of the people who live along the Duwamish River, who cannot even touch their water. I would ask the Department of Ecology to stop this permitting process right now and review what we are doing as holistically, not to do piecemeal processes that enable us to continue to dump more pollution and toxics into our Puget Sound. Instead, create a plan that attacks it entirely, from all the outflow that's coming in from all of this industrial area in Georgetown and South Park, to the efforts that are going in through the wastewater treatment plants. We have got to stop pooping in our water, and that is what we are doing. (applause)

Ecology's Response to Christina Gallegos' Testimony

Ecology regulates King County CSOs via the West Point NPDES permit. King County's 2008 CSO Control Plan Update was posted on their website in July 2008. Ecology understands that there was much opportunity for input by various stakeholders during its development. Ecology does not permit any new CSO outfalls. Placing a moratorium on the existing West Point outfall and other CSOs is not a rational option and would result in public health crises and emergencies via raw sewage backups in homes, businesses, industries, and on open public spaces.

DouGlas Palenshus: And if I'm saying your name and you didn't indicate you wanted to speak, and you're changing your mind and coming up, please let me know that. The next person is—it actually looks like Coger or Cougar perhaps, and followed by Tom Knoblauch, if you wish to speak. And if you didn't indicate so, feel free to just not come up. Okay, good. So next name that was Ron Sterling, as a maybe, followed . . . Did I say that?. Tom Knoblauch indicated he wouldn't be coming up. Okay. Thank you. Thank you, Tom. Patricia Sumption, followed by Barbara Matthes perhaps. (applause)

DouGlas Palenshus: Pat left. Rein Attemann was a perhaps, followed by another perhaps Dagmar and Bob Cronn. Rein Atteman, no? Are you Rein? No?. Thank you. Please go ahead then. If you would give your name, address, affiliation . . .

Dagmar Cronn

I'm Dagmar Cronn and my address is 1046 S Elm Grove St. My house is something on the order of 30 feet from the Duwamish River. I have two specific requests. One, I think that the permit, when it is issued, should include an aspect that directs the agency to start plans for tertiary treatment. I think it's going to be impossible for the studies of the nutrients that are being conducted not to show that there are too many nutrients being (unidentifiable). I'll try to raise my voice. Thank you. The need to address tertiary treatment—I can see from the presentation this evening (unidentifiable) that there are number of the standards that are not being—not have been found to be exceeded, but (unidentifiable). Thank you. Think that will help? Okay, Thank you. Okay, hopefully this is working for us. Tertiary treatment will control a number of pollutants that the present studies do not show a problem, but certainly anyone watching anything to do with Puget Sound knows are a problem without the data. For a scientist to say that it—it's sacrilegious, but I just said it anyway. Secondly, I think that the permit needs to do a couple of things to shorten the time period during which the CSOs continue to be a problem. The total timeframe out should be shortened from 2027. And, secondly, the directives should be worked into the permit in such a fashion that there's actually action to

limit CSO overflows rather than the kinds of things that there are so many of. And I'm sure they're good in the present proposal, which are ones to report on the CSO situation. I think we need something explicit that will cause the actual emissions to decrease. Thank you. (applause)

Ecology's Response to Dagmar Cronn's Testimony

A permit requirement for King County to upgrade to tertiary treatment must be carefully considered and include a sound technical, scientific, and economic basis. Due to West Point's existing, limited footprint, site constraints, and combined sewer service area, this requirement needs proper justification. Currently, Ecology has defined secondary treatment at municipal wastewater treatment plants as All, Known, Available, and Reasonable Treatment (AKART). However, Ecology has recently hired a consultant to examine the feasibility and costs of removing nutrients from various WWTPs around the State. This study is supposed to include large WWTPs, like West Point. Until Ecology's Study reaches some definitive conclusions, we will rely on our water quality-based process in dealing with water quality problems. At this time, there is not conclusive evidence that West Point's discharge is causing low dissolved oxygen levels in South Puget Sound. Ecology will know more information in the next couple of years after our South Puget Sound Dissolved Oxygen Study is completed. Please understand that requiring WWTP to go to tertiary treatment, on an AKART basis, is an Ecology programmatic decision and not made in a piecemeal approach, implemented by various individual permits.

DouGlas Palenshus: Thank you. I'm afraid I skipped over David Matthes. Do you know if he also left? David Matthes. Our next name is Steve Richmond and indication by Lincoln Loer perhaps.

Steve Richmond: Can you hear me okay?

DouGlas Palenshus: Let's raise it up a little bit.

Steve Richmond

My name is Steve Richmond. I live at 6502 18th Ave SW, in Seattle, 98106. I'm a member of the Puget Creek Watershed Alliance, which is a grassroots group in West Seattle. Puget Creek is a watershed that drains into the Duwamish River near the Duwamish Tribe Longhouse, newly built. My comment is that we already use secondary treated water to irrigate golf courses. And I would like to suggest that we use tertiary water treatment to enhance the flow of urban creeks that could potentially be salmon habitat. There have been a lot of salmon habitat restoration projects in the city that simply fail because of storm water runoff. A tremendous amount of money has been spent. And it's discouraging, also, the amount of money that has been spent in the Duwamish River cleanup effort that continues to be polluted. So I would just like to suggest that tertiary treatment plants in the city could create an asset potentially bringing back fish habitat, filtering water through wetlands and then having a clean system that goes into Puget Sound. And I do want to speak up for Puget Creek, in particular, because there's a number of attributes in West Seattle. One being, there is a water treatment pipe from King County or Renton facility that goes along the Duwamish River, plus Marginal Way, right by the Duwamish Tribe Longhouse that is a source of secondary treated water that could be tertiary treated and pumped uphill into the Puget Creek Watershed, which has an empty sewer pipe right in the middle of it. My neighborhood, ten years ago, stopped development. So that is an empty pipe ready for pumped water that could be pumped uphill and put through a couple wetlands and you could have a year around flow. It would be a wonderful gesture to all the people of Seattle, and particularly to the Duwamish Tribe. But I think the tertiary water, treated water, could be used throughout the city to enhance our urban creeks. Thank you. (applause)

Ecology's Response to Steve Richmonds's Testimony

Comments noted. Ecology encourages the beneficial use of reclaimed water. Ecology agrees that a reclaimed water project to pump South Plant's reclaimed water for in-stream flow augmentation to Puget Creek would be beneficial. Ecology suggests that the Puget Creek Watershed Alliance contact King County and the City of Seattle in regard to project implementation.

DouGlas Palenshus: (unidentifiable) that indicated maybe. Ah, next is Heather Trim and followed by John Guevarra as a possible.

Heather Trim

Thank you everyone for sticking through a long meeting about process and technical stuff. I'm Heather Trim with People For Puget Sound. And I'd like to start off by saying that those of us who know an awful lot about this permit, like eating and breathing it, which some of the King County staff and Ecology staff, and to a certain extent, me, aren't nearly as eloquent as the citizens. And I think that the citizens are extraordinarily important to this process. And, also, the permit itself is actually not just a technical document. There are absolutely places in the permit that can be influenced by our citizen interest, because ecology is not actually fixed by rules, as was kind of implied. There are places where they can have "if, then" statements, and I'll describe that in a minute. This thing does have room for improvement, and citizen involvement is very important. So everyone poops. And we are all downhill of that poop. And so is Puget Sound. And, unfortunately—so obviously we need sewage treatment plants in Puget Sound and we aren't gonna get away from that. But the question is, "can we improve how we do it?" Unfortunately, with this permit, we're basically seeing a permit that is not fundamentally that different than the last permit, except for a little bit of extra monitoring and a couple of small changes. Fundamentally, this is not that different of a permit, unfortunately. And with the Puget Sound Partnership Action agenda that has now been adopted as of December 1, it is time for us to start to look at all of our permits in Puget Sound differently. Not just this permit, but all of them. And to say that it's a programmatic thing is one thing, but King County is, in fact, unfortunately, because we all live here, "the big source" in Puget Sound. Our two facilities: West Point, here—we're discussing tonight—and then the Renton facility, which is coming up for renewal later this year. Get ready. The two together are 50 percent of the treated sewage into Puget Sound. And they're both—one discharges at Discovery Point, the other one at Alki; both sides of Elliott Bay. So we are a major, major influence. And, therefore, this permit does have a level of responsibility to do the right thing and to make improvements. The other permits will have to follow suit. Further, King County has a responsibility, I think, because we are such a big influence on the pollution load and on Puget Sound in general. But we do need to be more proactive. Unfortunately, when you look at—when we hear terms and we understand, and hear the presentation, we—but it is meeting standards. Across the United States there are plenty of things that are meeting standards. But what you see is that you still have health impacts. So our current regulatory regime, which is, you know, through scientific effort and all that kind of thing, it's—that's the way it is. But, in fact, we can do a lot better. And, in fact, we're seeing a lot of harm caused to humans and wildlife by things that are meeting standards. And the issue of nutrients in Puget Sound, as well as toxics—we have our toxic Orcas and we also have huge nutrient problems in the Southern Sound in Hood Canal and, potentially, we might start seeing them in the Central Sound as in the enclosed bays, because our population is increasing. So one of the major things that we're requesting, and with, I think, the backing of a lot of citizens, is that what we need in the permit right now are triggers. We're not saying that you have to upgrade a tertiary without any proof, but what we want are triggers—that if Ecology studies, which are underway—and it's great that

Ecology and EPA and the Puget Sound Partnership—are leading in terms of toxics and pharmaceuticals and nutrients. If those studies show a problem, then West Point should start to act. And if we don't have that language in the permit, which, by the way, in many permits in the rest of the United States they have that kind of language, and in Washington we generally have not done that—but we can—then we don't have to wait five years before we even start to act. So if in two years, when the Dissolved Oxygen Study results come out and it says that "yes," the facilities need to upgrade, we don't need to wait three more years before we even start thinking. And, I have to say, "sorry, but I have not seen permits get reopened here." They say, "well, we'll reopen the permit." Well, that doesn't really happen. And so, we need those kind of trigger language in the permit now. So, oh, the other thing is that there's an AKART study that was described tonight. That's technology. If you were to rebuild West Point today, most likely it would be built with tertiary or advanced treatment. So we are now at the point—all these new facilities that are being built in Puget Sound: Carnation, Duvall, Brightwater, etc.—all these brand new plants that are being built right now are being built with tertiary or advanced treatment. We are at that point. It is cost feasible and it's also technologically feasible. That's where we're at. That's called "AKART." And that study will be done in a year. That's going to be done by December. And so, again, another trigger that can be used for the West Point permit, and the Renton one. We are very concerned about the pre-treatment program. That's the industrial waste that is coming into the sewage treatment plant at West Point. We have the largest industrial load going to our sewage treatment plant in all the ones in Puget Sound. There are, by the way, 102 sewage treatment plants in Puget Sound that discharge ridge top to ridge top. What is in the permit right now is not what we asked for. What we asked for was to have source tracking. So all your fingers of the sewage system, which areas had the highest mercury? Which areas had the highest phthalates? Which areas had the highest lead? Look at it from the point of view of detection going up the system. Not just more sampling of a few industries, which was what was put in the permit. So that's why we're saying that that is not adequate; what was put in. We want actual toxics tracing. This will help the CSOs, as well. Not just the West Point outfall. Pharmaceuticals and personal care products are becoming more and more of a big problem. You see more and more articles. USA Today did a huge thing "Looking at Drinking Water." We're blessed here in Puget Sound that we don't drink a lot of sewage water; water coming from sewage treatments plants up above. A lot of the United States does. We only have two watersheds in Puget Sound that do that, and that's not us. We have a protected watershed. However, we have a lot of animals out in Puget Sound that are drinking that water. And it's not that each individual pharmaceutical's a problem, because you have trace amounts of each one. It's the soup of the pharmaceuticals, plus our pesticides, plus our industrial chemicals, including bisphenol A, which is part of our baby bottles. So the problem is that we really need to start to look at pharmaceuticals out of this facility. (unidentifiable). Okay, fine. In Elliott Bay, we have male English sole that have become feminized. And I don't want to get into all the details(unidentifiable) you to know the details about (unidentifiable) the United States when it comes to what we think are coming from pharmaceuticals and personal care products. We also have a relatively new study done by University of Washington researchers looking at spices coming out of the sewage treatment plant. Or, actually, spices showing up in Puget Sound. After Thanksgiving, you have a huge peak of—I can't remember what it is, is it rosemary or thyme or cinnamon, cinnamon. And during the Christmas season, you have a huge peak of other spices and a summary of a huge peak of the fake vanilla, which is part of ice cream. It's not just right there at the outfall. They're seeing it throughout the Central Basin and they see the spike out in the Central Basin. So the problem is the chemicals coming out of the outfall, in fact, are going out into the Sound. This is happening all over the Sound, not just West Point. But imagine our load. I want to draw your attention to our Fact Sheet. On the second page of our Fact Sheet, for

those of you who got it—and everyone's welcome to have a copy—I've taken the figure that was shown by Andrew—and that was a very nice presentation by Andrew about the South Sound—but there's a really critical point that needs to be made, which is that the West Point and Renton facilities have a much larger load coming in. They are—just West Point is 8,847 kilograms per day of nitrogen. And this is in the warm-up. This is in September; the critical point. Whereas, the South Central, all those chemical plants in South Sound, they're all miniscule compared to the load at both West Point and Renton. We are a monster, in fact. Now, the question is, how much of an impact are we, going down? And that's what the study will tell us and that's what we need to know. We also want to know what's the impact, and that's the other study Ecology is doing, of those facilities on the Central Sound and going upwards. Am I doing okay on time?

DouGlas Palenshus: Heather, you're fine with time. You have at least 5 more minutes. (unidentifiable)

Heather Trim: (unidentifiable) the combined sewer overflows, because B.J. told me that. But we completely agree that the whole system, the way CSOs are done in Duwamish, is not okay. But I do want to say that EPA did a CSO Compliance Inspection last January, of King County, and another one in March, of Seattle. They were doing this compliance inspection for the purpose of this permit renewal. The report has not been released to us, the public, and I believe that a compliance issue like this should be given in the Fact Sheet and given to the public before the permit is renewed. And I request that the permit not be renewed and the public comment period extended until that report. And also, we need to do some public review on the other report that B. J. mentioned; the King County plan. We want that extended. That is no okay to have a major report like that not available to us on a major issue we care about. And I understand—I was not told this directly, but I deduced that the reason that that report is not available is because there are violations in their negotiations with King County about how to deal with that. And that's why it's taking so long. So if there's—I don't know, I could be wrong, (unidentifiable) a little guess. There's another problem and that is the sediment sampling around the outfalls; the West Point outfall in the sediment there, and also around the CSOs. That sediment sampling of every couple years, when it's been sampled by King County, has shown hits where they've actually failed some of the toxicity tests, or they have some exceedances - not every time and not every station. But the fact is, we're still seeing—we are seeing sediment problems and the (unidentifiable). That's not okay. We need to actually have action. We need to start (unidentifiable) sediment hits. Furthermore, they don't test, and this is what we've requested as well, that the tissue be sampled, so the tissue —in other words, the bioaccumulation of mercury, and all these other chemicals in the tissue of the fish in that area, is something that we think should be included in the permit. And that is absolutely allowed and under the authority of the agencies. It is concerning, because as some of the citizens have mentioned, we come and do these comment at public hearing and we also have public comment periods, but often we do not see any changes in the item that we're making comment on. In this case the permit. And I'm very concerned that we will actually genuinely have changes in this permit and that this is not just been an extended time. What was not put in that timeline (unidentifiable) if the permit (unidentifiable). And that wasn't there, which made me more worried. Because, that means that you were not thinking about doing any kind of extra public review. This permit does not actually have that many changes from this previous permit, in terms of what King County is doing. So extending the permit renewal by another six months, or whatever it would take, won't make one bit of difference in terms of water quality, but we could actually get some stuff in there that might actually make a difference for the long term. We are talking about tertiary treatment changes. It's a long timeframe to change over to an upgrade. And that means within the whole system.

Maybe not at the end of the pipe. Maybe there are changes (unidentifiable). We need to start to think about that in advance. It took thirty years for this facility to go from primary to secondary treatment. Do we have to wait thirty more years to do the next upgrade to tertiary? Thank you. (applause)

Ecology's Response to Heather Trim's Testimony

Modifications to the permit or its limits need to be justified on a technical and scientific basis.

The proposed permit requires numerous additional monitoring requirements and studies and has more stringent effluent limits for some CSO treatment facilities, as described in the Fact Sheet. The effluent limits for the West Point WWTP are largely unchanged from the previous permit because: 1) Washington's rule requiring secondary treatment limits for municipal WWTPs has not changed; 2) the WWTP did not violate any of its effluent parameters in the last 5 years; 3) the reasonable potential analysis did not indicate that any priority pollutant or toxic pollutant in the West Point's discharge had a reasonable potential to violate the water quality standards; and 4) the whole effluent toxicity testing on fish indicated that the West Point's WWTP's discharge is unlikely to cause toxicity in fish present at the outfall.

Besides the West Point WWTP's discharge, there are many point source inputs (stormwater outfalls, direct industrial discharges, other municipal WWTP outfalls, non-King County CSOs), and non-point sources (stormwater runoff, residential runoff, etc.) into Puget Sound. Ecology regulates many of these discharges. Ecology evaluated toxics in West Point's discharge and found that none of the priority pollutants or toxic pollutants had a reasonable potential to violate the State's water quality standards. Ecology also required the County to perform whole effluent toxicity (WET) testing. The results of the WET testing indicated that the West Point's discharge is unlikely to cause fish toxicity problems in Puget Sound.

In regard to AKART, Washington rule requires technology-based, secondary treatment limits for municipal WWTPs. Until that rule is changed, technology-based secondary treatment limits will remain in effect for all of the WWTPs statewide. The Brightwater WWTP and the Carnation WWTP were mentioned in the above comment. Although these new WWTPs have advance treatment, their limits are secondary treatment limits. Just because a WWTP has a secondary treatment limit doesn't mean that it will operate and only achieve pollutant removals at that limit. In other words, WWTPs have secondary limits but many of them have effluent discharges that are much lower than their permit limits. The Brightwater and Carnation WWTPs are newly constructed and serve separate sanitary sewer systems. In the case of Carnation, the collection system is entirely "new-type" construction and free from infiltration and inflow. Unlike Brightwater and Carnation WWTPs, the West Point WWTP is an existing facility with limited land area for expansion, significant site constraints, and serves a combined sewer collection system. The cold-temperature, high-peak wet weather flows from West Point's combined sewer area make it much more difficult to incorporate nitrogen removal, a biological process, than WWTPs serving separate sanitary sewer systems. From a constructability standpoint, it is much more difficult to retrofit an existing WWTP to remove nitrogen than for a newly planned and designed WWTP. As mentioned previously, Ecology is conducting a Technical and Economic Evaluation of WWTPs to remove nutrients. West Point WWTP is included in this study and therefore, the study will provide information on the technical feasibility and costs of upgrading West Point WWTP to remove nitrogen.

As for pharmaceuticals and personal care products, Ecology has a study that is underway that investigates the removal efficiencies of these pollutants from various types of WWTPs. Ecology does not think that it is a wise use of limited resources to make King County duplicate this study.

Regarding CSOs, please see Ecology's above response to B.J. Cummings. The EPA Region 10's field investigation of King County's CSO system in January 2008 was not part of this NPDES permit renewal process. In fact, the City of Seattle's CSO system was also investigated in March 2008, and the City has yet to apply for a permit renewal. Seattle's CSO permit expires in March 2010. The EPA field investigations were initiated as a result of a national prioritization on controlling CSOs. The field investigations focused on the nine minimum controls. At the time of this response, the final results have not been released but Ecology believes that any possible EPA enforcement action, as a result of the field investigation, would be addressed by a mechanism outside of this permit. For these reasons, Ecology did not include a discussion in the fact sheet and extend the public comment period again.

The previous sediment studies' results have not been conclusive. Many of the benthic toxicity exceedances have been slight. Because of this, we are requiring more in-depth studies to understand the locations and sources of toxicity. A request for bioaccumulation and biomonitoring was made. It is difficult to determine and differentiate the effects of this discharge from all other sources of contaminants entering Puget Sound. At this time, Ecology does not have the tools and criteria to move forward with this type of evaluation. Ecology believes that WET testing is an appropriate tool and that there is a legal basis for this test.

DouGlas Palenshus: Thank you. Is it John Guevarra?

John Guevarra

My name's John Guevarra. I live in South Park. I've been there for probably 45 years as a resident. And I keep thinking about all the pollution that is in the Duwamish River and surrounding areas and I'm wondering if maybe, as I stand here, that I'm half crazy with pollutants in my body that I can't even think straight. And it is discouraging when you hear of someone like Greenspan, who is our leader in thinking about economics in the nation, and in the world, who had to admit that with all his expertise he screwed up. (unidentifiable). And so, here we are with a problem that hasn't been solved in my lifetime. I'm 80 years old. And I'm reminded of the statement that, "Justice delayed is justice denied." And who in here would say they're willing to give up the justice of their life, liberty, and pursuit of happiness? Seems to me I read that someplace. But I'm finely reminded of an activity I have, and that is clipping comic items in the newspaper and putting them in a little envelope and I kind of catalog them. And the one thing that struck me was a comment that was made recently in our bible study that was a list of comments about things that are kind of silly. And the thing that sticks in my mind right now is a one-sentence line that said, "No matter how hard you push the envelope, it's still stationery." (laughter) And I feel like, "No". The situation we're in here is stationary. And people got upset with our society and the way we run. And we wanted a change. We wanted something done that makes us well and happy and have a life. And so we got rid of an Administration in our government. We called it Bush Administration, because they failed to listen to us and act. And I remember, not so long ago, when the EPA was trying to do some things, that there would seem to be some kind of disinterest from the highest level of our government. And even as I stand here right now, most of us could probably say, "Let's fix it now." And so the point of what I'm getting at is that I'll bet the experts that we have hired right now could sit down and write a plan to fix it "now." No question in my mind. And I think

that those experts have a responsibility to tell us what our options are and when it could be done. (unidentifiable) haven't done that in my mind. I've got two and a half inches of paperwork I picked up over there. And it doesn't add up (unidentifiable) that I have to sit down and read that (unidentifiable). I really don't like what they're doing, which in my mind is stationary. So I would really, really appreciate it if the people that are in charge would write down their white paper, and they don't have to sign it, that's saying, if we really want to do—the public wants to do something about the Duwamish River and our environment, these are the things that we would do, without any interference from people like Mr. Bush's Administration. We have people like all through government. Sometimes they refer to themselves as compassionate conservatives (unidentifiable) they say that when you flush the toilet you're into politics. And so we've got to somehow or another use politics to get our nation straightened out. So whether it's economics or pollutants, we have a responsibility to speak out. And even though I might sound a little crazy once in a while, I sure do respect the free speech and the opportunity that this group is offering us by letting our voice be heard. But I'd like to have their voice heard, even if the leadership in our governments disagree. We need to have the answers to those questions. Do it now. Tell us what needs to be done, even if it's critical of what you've done in the past. We need change. And we need it now. So I thank you again for the opportunity to stand here and hear these things, and we look forward to leadership. Leadership is a tough road to hoe, but we need it from you people, and we need it here now, and we need to act on it. Thank you for the time. (applause)

Ecology's Response to John Guevarra's Testimony

Comments noted.

DouGlas Palenshus: Thank you, John. A few more people indicated that they may wish to speak. Two were maybes and one certainly. The two maybes were Shari Busek and Erin Stamper. Do you wish to speak? So, Pamela Elardo.

Pamela Elardo

Hi. My name is Pamela Elardo. I am the West Section Manager for King County. That means I'm the person who's responsible for compliance with this NPDES permit. I am a registered professional engineer in the state of Washington. I've been working in the environmental engineering field for over 25 years. And I've also worked extensively internationally. So I do know what it's like for people to live without wastewater treatment services similar to what we have in our region. I'd like to thank the Department of Ecology for running this public process. It's been a great process. I'm very happy to see the number of people that showed up today. I am very supportive of the public process and I'm very happy that we've had enough interest to really make this a better permit. Before I—I have a few points to make. But I just want to just point out that I'm really proud of how West Point continues to protect Puget Sound daily in the work we do. And that's what we do every day, and we take it very seriously. In my talk, my brief talk here, I want to provide some information about our system and then I want to talk about some specific concerns that came up tonight that I'd like to address. And then I want to give you some information about what we're doing in the future and the other public involvement precipitation processes that are coming up. So specifically about our system—I don't know if people know these facts—we serve 1.4 million people. That's residences and businesses that put their waste in the sanitary sewer. That's a big chunk of folks around Puget Sound. And 420 square miles. (laughter) Yeah. And over 350 miles of conveyance pipelines. So not only are we working at the treatment plant, I am responsible to make sure the entire system of pump stations and pipelines are also serving our region. Now, on to a couple points that were made. Currently, we capture 100% of the

wastewater during dry weather flow. We're required to do that, and that's what we do. We can capture 96% of the wet weather flows that come through that combined system that Mark showed a great graph of earlier, but we're (unidentifiable) 99% of the wet weather flows and maintain our 100% compliance with the dry weather flows. So, in that sense, we're reducing the net pollutant loading to Puget Sound by going tighter and tighter on the amount of combined sewer discharges that we have to the region. Secondly, the system-wide King County runs several treatment plants. We have Brightwater, we have South Plant, we have West Point, and then we have two smaller plants in the region. When Brightwater comes online up north, they're going to take a number of the flows away from West Point. A large percentage of our flows will be going north. That will reduce the number of CSOs in our system and this can reduce the flow to the West Point treatment plant. So, in effect, it's gonna reduce the overall loading to the plant. Okay. And finally, another point that came up about the CSO Control Plan. Now, we did submit our existing plan to the Department of Ecology back in June. Now, the reason why we did that is because EPA did a CSO Inspection Report last year. And we are waiting for their report to be issued to us, which won't include some items that we're going to need to address. And once that report's supplied to us, it may change what we're going to do for CSO Control and, therefore, our new CSO Control Plan has yet to be issued. So it isn't—we haven't sent something that is without public comment. There's a public comment period and a public input period that will happen this year in 2009. So make sure people understand that and keep in touch with what our information will be about CSOs on the website and other methods so that you can get your input on that. Very important document, which will set up which projects we're going to do and what are the schedules for it, between now and the year 2030. Now, I wanna talk a little bit about the challenges we face. As we said, we're managing a combined system. So the flows to the plant are typically 100 million gallons per day. And that's what we treat, which is the discharge of wastewater from businesses and from residences. When there's a storm event—when this combined system throughout the city of Seattle receives a large storm that flow can go from 100 to 440 million gallons in a moments notice, essentially. So our plant has to be designed to respond to the high variability in flow. It's very much an operational and an engineering challenge that we effectively take care of on a daily basis. Now overall, in any year, we effectively treat 35 to 40 billion gallons of wastewater. And it's combined with storm water, obviously. A little bit more about the combined sewer system. When we do have these significant events—large storms occur—there is a combination of sewage and storm water, typically (unidentifiable). Ten to one dissolution. We do have to release that water to local water bodies. The reason we have to do that—and we are working diligently to reduce it—but the reason we have to do it, is otherwise we'd be flooding people's homes and neighborhoods and streets and creating a (unidentifiable) necessary problems (unidentifiable). But it is a problem we're diligently addressing to reduce that amount of flow like I mentioned earlier. So within that CSO Control Plan we have 20 projects coming up between now and the year 2030. That means new projects are starting every one to three years. Like I said, there's input, public input that will be happening over this next year, but then every one of those projects themselves have a public process that you could participate in. So if there's a project in your neighborhood, or a project in part of our system that you're particularly interested in, there's another public process that you can be engaged in. And I encourage you to do that. Ultimately, we'll go down to the State standard, which is one event per year. And that's our ultimate goal with the whole CSO Control Program. Okay. Regionally, we are participating in a number of activities that are really important to the Puget Sound. For example, we're working with Puget Sound Partnership who has a number of activities and priorities for the whole Sound. But at the same time, we're participating with Department of Ecology Dissolved Oxygen Study in Puget Sound. Now the results of those Dissolved Oxygen Studies will be very interesting and what it will do is show us where the water

quality impairments are succinctly in the Puget Sound and what is the cause for those water quality problems. What are the inputs that are causing the Dissolved Oxygen problem. And we really need to know that. We need to know that to make steps effectively and in the right direction to solve them. At this point, we don't know right now whether controlling West Point would have an impact at all on that D.O. problem in Puget Sound. The information isn't there. But the information is going to be coming. So when those studies come out, when the results come out, we can effectively decide which is the most beneficial and cost effective way to address the problem (unidentifiable). As public officials, that's the last thing we want to be doing. So when those studies come out, and if, in fact, it shows that West Point discharge is a problem and is contributing to it, we are definitely gonna make the investment. We are gonna go to our ratepayers, we are going to go to our legislative bodies, to make sure we have the resources to do that implementation. We're not an agency of inaction. And if there is an identified problem that we're linked to, we're gonna take action. Finally, I wanted to talk a little bit about our—well, we're participating in sediment remediation throughout the Duwamish River, for example. And we have a very effective Industrial Waste Program. And this is where we regulate discharges from industries to our sanitary sewer. So they actually have effluent limitations they must meet. They're very strict. We have a team of people who inspect them, and monitor them, and make improvements as needed to protect our plant. Because I don't want my biosolids, which is the solid products that comes out of our plant that's used for fertilizer—I don't want to limit where I can use them. It's very important that the flows to our plant are protected. And so we have this Industrial Waste Program. And it's a very robust program. It's recognized nationally. We've had a Dental Waste Program that has taken 375 pounds of mercury, a very toxic metal, out of our biosolids over the last several years. On top of that, we have a Public Education Program that helps people understand how to protect our plant by not putting things down the drain. We want the public to really participate in making the Puget Sound better. And that's a very important way to get it done. And, finally, I would just like to add—if I can recall here—back, I mentioned biosolids. We're not a wastewater plant as much as we are a recycling plant. We create fertilizers through our Biosolids Project. I encourage everybody to take a tour. It's amazing. It's amazing. I'm amazed every day at what we do. And the biosolids are the solids, organic material, that, again, is used in fertilizer. And it actually removes 2.4 million pounds of organic nitrogen annually out of our influent. So that is a big reduction in nitrogen right there. We also generate methane gas in our solids process. And methane is a fuel. We use that to run our raw sewage pump engines and run boilers on the site. You should come see that, too. On top of that, we have a Reclaimed Water Program where we use about 200 million gallons a year to do irrigation and in other industrial uses within the plant. So that means there's 200 million gallons a year of City of Seattle water that we're not using. So we are not using potable water where we can use our actual treated effluent throughout the plant site. And we're planning to expand that Reclaimed Water Program where it makes sense throughout the region. Again, so, that ends my testimony. I'm very happy to be here tonight. And, like I said, I'm proud that West Point is going to be able to protect Puget Sound as well as and as long as we have over the last 40 years. Thanks. (applause)

Ecology's Response to Pam Elardo's Testimony

Comments noted. By controlling the volume of CSO discharges, this will improve water quality. Ecology appreciates King County's involvement with the Puget Sound Partnership and Ecology's studies.

DouGlas Palenshus: Thank you, Pam. That concludes all the people who indicated they would or may wish to speak. If there's someone else that would like to speak briefly. Gentleman coming to the microphone, could you state your name, address, and affiliation?

Fred Felleman

Yeah. I actually signed up, but I might have misheard or misspoken. My name is Fred Felleman. I'm the northwest consultant for Friends of the Earth and live in North Beach between the Carkeek Park and, ah, you know the cut. . . And one of the few areas where (unidentifiable) to the beach where one of the only places where water columns standards are exceeded in Puget Sound. So it's a nice place to visit, but you wouldn't wanna feed your dog there. But the idea that—it's a great, great place and we're pleased by the efforts that are made to continue to improve it. I guess, just from a public process point of view, the idea that a permit would have a Fact Sheet almost as fat as the permit and then have a one-pager sort of deal that really doesn't describe the permit is kind of unbelievable. So for the public to be able to get their head around, "So what are we permitting here?," it's obtuse and opaque and not easy to understand. And I understand people's frustration by just, you know, so tell me what's different and what are you proposing to do in, you know, two pages or less. It seems to me you can do a lot better job than this. Although it's good to have the documentation, there is no executive summary, which, you know, the Fact Sheet doesn't even have an executive summary. The Fact Sheet doesn't really (unidentifiable)—the summary is of what is covers, but it's more of a table of contents than a collection of analysis. And so I really don't understand how the public is supposed to get their head around this. And I find that to be troubling and something that could be easily improved. But the—ultimately, I think the question really is, as I sort of raised earlier, the general goals are—we have certain projects in here that will reduce, and things like that, but we know forecasts are, although in a temporary recession, we have long term very large projections for the growth in this area. So it would seem to me that we could have like different alternatives based on projections and how the loading into the Sound would change, based on the different proposed alternatives that we'd be putting forward here so that there's some sense of cumulative burdens and forecasting. And that where future investments could be made down the road, we can see sort of where in the curve we might want to be getting serious about these things. So it allows for a planning document. Again, unless we know where we stand and where we're going, it's sort of hard to know what we're doing in the meantime. I appreciate that—I will try to get through this, but I don't know that I'm going to be able to give this the time it deserves and would hope that it would be easier. Thank you. (applause)

Ecology's Response to Fred Felleman's Testimony

Comments noted. An Executive Summary has been added to the Fact Sheet.

DouGlas Palenshus: Thank you. I believe that's everyone that indicated they wished to speak. And, again, if there's someone that would make a very brief comment, we can take just a minute. A couple minutes, please.

Lisa De Alva

My name's Lisa De Alva and I live on the Duwamish. Oops, hello. And I have to say, it was a little, sort of, comforting to know that the scientists from South Park didn't get a lot of this, 'cause I sure as hell don't. I've got (unidentifiable). Honey, I can't do this. This is irratating. They're taking all the drugs making it through the toilet system. And we have got all sorts of PCBs and stuff lying around. And I'm the living experiment. I swim in that river everyday in the summertime. So I know George Womberg from the Port of Seattle will be very happy if it has a deleterious effect on my health, but I'd kind of like to see something happening that will keep more of this crap out of the water. Although, I gotta tell you, I'm a little afraid to use my toilet now. (laughter) I don't know what's going down there. This is a whole ton of information. A lot of it I still don't understand. I'm gonna look at the handouts from People For Puget Sound and Duwamish Cleanup Coalition

and I'm not even gonna try and go through that War and Peace thing that that guy was just talking about. But it was great to hear all the comments from the people that are concerned about this that don't get it, like me. So I hope something good comes out of this. (applause)

Ecology's Response to Lisa De Alva's Testimony

Comments noted.

DouGlas Palenshus: Thank you. If you'd like to send Ecology written comments, please remember they must be received no later than February 13, 2009 and can be submitted by email, regular mail, or in person to the Water Quality Permit Coordinator, that's Tricia Miller, who you were introduced to earlier, Department of Ecology, Northwest Regional Office, 3190 160th Avenue SE, Bellevue, WA 98008-5452, or by email tmil461@ecy.wa.gov. Once again, tmil461@ecy.wa.gov. Information about the public comment period is also available on our web page. All of the testimony received at this hearing, along with all written comments received or postmarked by February 13, 2009, will help Ecology make a decision about the draft permit and be part of the official hearing record for this NPDES permit. After that time, Ecology will summarize all comments received and provide an individual response or a more general response to each comment. Ecology's responses to all comments will be included in an appendix in the final permit. After considering the comments received, and Ecology's responses, and reviewing the permit for consistency with the Ecology policies and guidelines, Ecology will either one finalize the draft permit as is or final the permit with changes. Ecology expects to issue a final permit around mid- to late March. The final permit, along with comments and responses, will be available on our web page. For those of you who have an email address, we will provide an update on the permit status. If you previously received an email from Ecology regarding this hearing, you will be included on the status update, along with a link to the final permit and response to comments. You can add your email address to the signup sheets in the rear, if you wish. If we can be of any further help to you, please don't hesitate to contact Mark Henley at (425) 649-7103. Does anyone need that again? Or email address mahe461@ecy.wa.gov. Does anyone need that again? On behalf of Department of Ecology, thank you for coming tonight. We appreciate your cooperation and courtesy. Let the record show that this hearing is adjourned at 9:08 p.m., January 27, 2009. Thank you.

Table 1: Hearing Attendance List

First Name	Last Name	Representing	Email Address
Jo	Sullivan	KC WTD	josullivan@kingcounty.gov
Mark	Henley	Dept. of Ecology	mahe461@ecy.wa.gov
Kevin	Fitzpatrick	Dept. of Ecology	kfit461@ecy.wa.gov
Monica	Van derVieran	King County	Monica.vandervieren@kingcounty.gov
BJ	Cummings	DRCC	bj@duwamishcleanup.org
Christie	True	King Co.	
Cathy	Farrar		cathy@cathyfarrar
John	Serra		
Tom	Ostrom	Suquamish Tribe	tostrom@suquamish.nsn.us
Richard	Hart	Self	
Chris	Tiffany	Self	ctiffanywe.aol.com
Mike	Dawda	Ecology	
Marvin	Moore	Brown and Caldwell	mmoore@brwncald.com
Laura	Fricke	Ecology	

First Name	Last Name	Representing	Email Address
Christina	Gallegos	CCEJ	
Betsy	Cooper	KC	
Ron	Sterling	Friends of Lournsy Beech Park	
Tony	Knoblalich		Toknoblalich@comcast.net
Patricia	Sumption	Friends of Green River	patsump@juno
Barbara	Matthes	Self	bamatt@comcast.net
David	Matthes	Self	dmatt@comcast.net
Rein Attemann		Self and PFPS	rattemann@pugetsound.org
Lisa	DeAlva	Self	blueoceangirlme@gmail.com
M.C.	Halvorsen	Self	Teddy2halle@yahoo.com
Dagmar & Bob	Cronn	South Park Neighborhood Assn.	cronn@oakland.edu
Steve	Richmond	Puget Creek Watershed Alliance	gardencycles@hotmail.com
Bruce W	Rummel	Great Water Associates	grtwater@mindspring.com
Lincoln	Loehr	Self	
Linn	Gould	Just Health Action	Gouldjha@gmail.com
Valerie	Madison		valeriemadison@hotmail.com
Heather	Trim	People For Puget Sound	htrim@pugetsound
Tom	Albro	Albro for Port	toma@albroforport.com
John	Guevarra	104 E 500 Donovan	
Robin	Guevarra	104 E 500 Donovan	
Shari	Busek	People 4 Puget Sound	Sharibr@gmail.com
Erin	Stamper		eestamper@gmail
Pam	Eldardo	King County	pam.elardo@kingcounty.gov
Kevin	Burrell	Ecoss	kevin@ecoss.org
Tish	Johnson	NTGround/Colliers	Tish.johnson@colliers.com
Mary	Strazer	Herrera Env. Consultants	mstrazer@herrerainc.com
Anthony	Draye		adraye999@yahoo.com
Kim	Cook	Myself	
Kim	Ramsey	WTD/citizen	kim.ramsey@kingcounty.gov
Katie	Frevert	U of W Superfund Bais Research	kfrevert@u.wa
Fred	Felleman	Friends of the Earth	felleman@comcast.net
Esther	Anderson	People 4 Puget Sound	eserza@gmail

Comments from People For Puget Sound

February 13, 2009

Jay Manning
Director
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600
Via E-mail: kbur461@ecy.wa.gov, tmil461@ecy.wa.gov

RE: West Point Wastewater Treatment Plant draft NPDES Permit (WA-002918-1)

To Director Manning,

We are writing to comment on *West Point Wastewater Treatment Plant Draft NPDES Permit (WA-002918-1),* dated November 14, 2008.

People For Puget Sound is a nonprofit, citizens' organization whose mission is to protect and restore Puget Sound and the Northwest Straits.

Thank you for extending the public comment period to February 13 and for agreeing to hold a public meeting on January 27, 2009. We hope that this public input will be seriously considered and that the permit will indeed be changed due to public comments received, even if that involves taking the permit out for another comment period. We are more interested in a quality permit than in meeting deadlines for a permit of a discharge with such significant importance for the health of Puget Sound.

We request that the NPDES permit not be renewed until Ecology conducts a public review process that includes the Compliance Inspection Report of the inspection conducted January 2008 by USEPA. This inspection was conducted in preparation of the NPDES permit renewal and we believe that compliance problems were found. Compliance is a critical part of a NPDES permit renewal and the public has been denied access to this report, even though King County has seen the document. We also believe that the King County CSO Update Plan (another required item of the NPDES permit) did not receive adequate public review nor a vote by the King County Council. This document also, should undergo public process, conducted by King County, prior to the NPDES permit renewal.

Unfortunately, the argument that the current permitted discharge "meets standards" does not ensure that the impact of the West Point effluent and CSO discharges do not cause harm to the health of Puget Sound. Evidence of low dissolved oxygen problems in the South Sound that have been increasing over the past decade is a good example that the "meeting of standards" by all of the sewage treatment plants in the South and Central Sound is not working.

Based upon our detailed analysis of the draft permit and Fact Sheet, People For Puget Sound believes that this draft permit and Fact Sheet need to be significantly strengthened (these points are described in more detail below) by including:

- *Stronger permit requirements*. In light of the recently adopted Puget Sound Partnership Action Agenda and the Governor's Initiative to restore the health of Puget Sound by 2020, we believe that the West Point draft permit should include requirements that:
    - put the facility on a path towards a needed upgrade from Secondary to Tertiary treatment using trigger language based on Ecology's current studies,
    - address toxic chemical loads by incorporating required source tracing,
    - include monitoring pharmaceuticals and endocrine disrupters,
    - begin the process to phase out mixing zones,
    - accelerate planning for increased reclaimed use, and
    - more aggressively reduce the toxic loading associated with combined sewer overflows.

- *Explanation of major changes.* Significant changes in permit, such as the new dilution factors, are not well explained or justified and need to be explained in the fact sheet.

Background comments

Facility description. The King County service area wastewater treatment includes 17 cities, 16 local sewer utilities, and one Tribe - about 1.4 million people within a 420-square-mile service area, which includes most of the urban areas of King County and parts of south Snohomish County and northeast Pierce County. The West Point Wastewater Treatment Plant is an activated sludge, secondary treatment facility and discharges into Puget Sound off near Discovery Park. In addition, the system includes 3 CSO Treatment facilities that discharge into Puget Sound - Alki, Carkeek and Denny/Elliott West as well as a facility that discharges into the Duwamish River - MLK/Henderson.

Flow. The West Point facility discharges approximately 30 percent of the total sewage discharged into the Puget Sound if one considers its contribution by design flow - 215 out of 713 million gallons per day or by actual annual flow - 118 (102, based on current draft fact sheet) out of 387 million gallons per day – discharged into the Puget Sound Basin from 102 sewage treatment plants. King County's Renton Plant is the 2nd largest sewage discharger to Puget Sound at 144 (design) or 78 (annual average) flow and discharges more than double the flow than the next smaller sewage treatment plant in the basin. [1]

Together these two facilities represent almost 50% of the sewage flow to Puget Sound basin and are located at the northern and southern points of Elliott Bay creating a large load of nutrients and toxic chemicals into the Central Basin. Below we describe the potential impacts of both of these facilities because we are concerned about the cumulative impacts of these two large facilities that are in close proximity to each other in Central Puget Sound, even taking into account the small decrease in the service population when the new Brightwater facility comes online in 2011.

[1] Trim, H., A. Hamilton, J. Pengilly, L. O'Rollins, and A. Yost. Toxic Chemicals in Puget Sound: The Impact of Mixing Zones on Permitted Discharges. People For Puget Sound. June 2008. Seattle, Washington.

Nutrients and Dissolved Oxygen Problems. Nutrient loading can lead to increases in phytoplankton which then can cause water quality problems such as reduced oxygen concentrations at depth, reduction in water clarity, and possible phytoplankton species shifts.[2] Areas of South Puget Sound are experiencing periods of low dissolved oxygen in the warm months of later summer/early fall. We fear that we will soon see more problems in Puget Sound in enclosed bays. A seven-year assessment of the scale, scope, and characteristics of nutrient enrichment and eutrophic conditions in the nation's estuaries published by NOAA in1999, determined that the Sound is under an increasing threat due to eutrophication problems. Their conclusion (in 1999) was that Puget Sound was in "moderate" condition with high levels of Chlorophyll a and macroalgae and moderate levels of nuisance/toxic blooms and that Puget Sound appeared to be on a declining trend.[3] A more recent study by Ecology showed that areas of Puget Sound, including the area around the West Point outfall stations have nutrient sensitivity, independent of season, but that more work is needed to make a complete assessment. [4]

In addition to dissolved oxygen problems, anecdotal evidence has accumulated that excessive Sea lettuce (Ulva fenestrata) and algal blooms in the Central Puget Sound are a growing problem. Puget Sound Action Team (the precursor to the Puget Sound Partnership) conducted a study in 2000 to look at the problem but reached no conclusions. Nonetheless, residents continue to complain about it:

> "There seems to be an increase in the amount of sea lettuce in Puget Sound," Greg Bargmann of the state Department of Fish and Wildlife told Federal Way residents recently. "It just seems that we're getting more and more reports from residents of seaweed piled 6 or 12 inches high."[5]

In sum, the impact of the large input of nutrients in the Central Sound from West Point and Renton on the dissolved oxygen problems in the South Sound and other problems is unknown but could be a problem. Ecology has two studies underway that will help make this determination: South Sound Dissolved Oxygen Study and Puget Sound Dissolved Oxygen Modeling Study.

South Sound Dissolved Oxygen Study. A study by the Department of Ecology - that will be concluded in 2010 - is examining the mechanisms of nutrient loading from all sources, hydrodynamics of currents, tides and freshwater flows, and other factors impacting dissolved oxygen problems in the South Sound. The researchers have not decided whether to place the northern boundary for the modeling at Des Moines or Edmonds because they have not yet determined the exact relationship of the Central Basin discharges and

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[2] Newton, J.A. and K. Van Voorhis, 2002. Seasonal Patterns and Controlling Factors of Primary Production in Puget Sound's Central Basin and Possession Sound. Washington State Department of Ecology, Olympia, WA. Publication No. 02-03-059. www.ecy.wa.gov/biblio/0203059.html

[3] Bricker, S.B., C.G. Clement, D.E. Pirhalla, S.P. Orlando, and D.R.G. Farrow. 1999. National Estuarine Eutrophication Assessment: Effects of Nutrient Enrichment in the Nation's Estuaries. NOAA, National Ocean Service, Special Projects Office and the National Centers for Coastal Ocean Science. Silver Spring, MD.

[4] Newton, et. al., 2002.

[5] Seattle PI, 2007. "Rotting sea lettuce a foul sign of Sound pollution. Blooms fed by excess nitrogen stink up the air in summer" by Robert McClure.

dynamics. It is likely, however, that there is an impact as the water that is "flushing" South Sound is coming from the Central Basin and these outfalls. Waters in the innermost extremities of the South Sound (Oakland Bay, for example) have a residence time of 120 days as a result of the poor circulation and long fingerly configuration of the Sound (average around 60 days for the entire South Sound). The northern boundary of the study has not been finalized and may go as far north as Edmonds because of the potential impact of the West Point and Renton facilities.

Preliminary data results show that although wastewater treatment facilities discharge a more or less constant input of nutrients into the waterways year-round, the input from rivers decreases dramatically in the warm months. Therefore 80% of the nutrient load in South Puget Sound is from sewage treatment plants in those critical warm months (September to October). If the Central Basin facilities are added to the calculation, then the wastewater load increases to 92% of the nutrient load in those months. The reason that the number jumps up so much is because West Point and Renton are significantly larger contributors (see figure).

The loads of nitrogen into Puget Sound from the two facilities are:

West Point	8,847 kg/day or 3229 metric tons per year
Renton	8,376 kg/day or 3057 metric tons per year

One large facility in the South Sound - the 28 MGD Lacey, Olympia, and Tumwater and Thurston County (LOTT) WWTP (see figure, LOTT is highlighted in yellow) – upgraded to tertiary treatment system for nitrogen removal and also releases much less BOD, TSS, pathogens and other pollutants than facilities providing just secondary treatment (such as West Point). According to the 2005 LOTT WWTP fact sheet, there was a 75% reduction of BOD after the tertiary treatment system was put into place. This demonstrates the advantage of an upgraded treatment for facilities that discharge into sensitive waters such as Puget Sound.

Puget Sound Dissolved Oxygen Modeling Study. A second study – to be completed in June 2010 - has been launched by Ecology to examine nutrient loads and impacts for the entire Puget Sound. As stated in the first study document, "This project will help determine if current nitrogen loadings from point and nonpoint sources into Puget Sound are significantly impacting water quality at a large scale and what level of nutrient reductions are necessary to reduce or eliminate human impacts to DO levels in sensitive areas."[6] Although coarser resolution than the South Sound study, this study will demonstrate potential impacts of facilities such as West Point and Renton.

Although it was not thought to be the case when Renton and West point were constructed, we now can see that large discharges like West Point and Renton may have impacts beyond their immediate outfall area. As our population grows, the load of nutrients and other stressors has increased in the past decades. People For Puget Sound, therefore, believes that the permit should include trigger language in the permit that requires action from King County if the studies (which will both be completed in 2010) show that West Point is a problem. More work will be needed to confirm and refine the work, but King County should be a

[6] WA Department of Ecology. 2009 (January). Quality Assurance Project Plan. Puget Sound Dissolved Oxygen Modeling Study: Intermediate-scale Model Development. By Brandon Sackmann. Ecology Project Tracker Code 09-503-02.

AKART. West Point WWTP provides secondary treatment (activated sludge) and we believe that tertiary or advanced treatment is now AKART – meaning it is now the reasonable standard for sewage treatment facilities. In other words, if a new plant was being constructed today, it would be tertiary. In fact, both of King County's new plants – Carnation and Brightwater – are being constructed with advanced treatment. According to local experts citation?, the cost of Tertiary Treatment has halved in the past few years with the new bio filtration systems and therefore the excuse of expense is no longer valid. The cost of not acting (in terms of the environmental impact) also no longer justifies status quo. For a major facility of the size of West Point, a 10-15 year planning timeline (less if we retrofit the existing facility) is needed and we can't afford to wait five more years to get started. Ecology has initiated an economic and technology study (AKART study) – report due December 2009 – which will evaluate the costs and benefits of available technologies that can reduce nitrogen and phosphorus in treated wastewater.

Endocrine Disrupters and Pharmaceuticals. In addition to potential nutrient loading problems from wastewater discharges, toxic and emerging chemicals are also a concern. NOAA published a study in 2008 that examined the feminization of male English sole In Elliott Bay. They found that male fish were producing Vitellogenin, a female yolk protein that only occurs in males in the presence of environmental estrogens or endocrine disrupters such as pharmaceuticals, plasticizers, and industrial chemicals. The highest incidence of the problem was found in Elliott Bay samples. In addition, they found that the timing of spawning in both male and female English sole appeared altered in the Elliott Bay fish they examined.[7] The sources of endocrine disrupters are likely from domestic and industrial wastewaters, combined sewer overflows and stormwater. Unfortunately, to date, pharmaceuticals and most endocrine disrupters are not sampled in the West Point influent or effluent. People For Puget Sound believes that West Point should be required to monitor for these chemicals so that we know what is being discharged today (both from the main outfall and from the combined sewer outfalls) and a develop a baseline for likely needed reductions through source control and improved treatment.

Temperature. The impact of temperature associated with such a large discharge is also a concern. The maximum effluent temperature from the West Point facility is 23.3°C (73.9°F) whereas the maximum daily ambient temperature of Puget Sound in that area is 14.7°C (58.5°F). This condition meets the permit limits because of the use of mixing zones but we feel that it is a problem that should be addressed in the frame of the Endangered Species Act and aquatic wildlife migration blockage with this large constant pulse of warm wastewater.

Toxic chemical loading. Because the King County facilities are so large and because they handle combined waste and a large component of industrial waste, they have large loads of toxic chemicals. The loads of some of these chemicals are:

[7] Johnson, L.L., et al., Xenoestrogen exposure and effects in English sole (Parophrys vetulus) from Puget Sound, WA, Aquat. Toxicol. (2008), doi:10.1016/j.aquatox.2008.03.001

	West Point*		Renton**		
	Ave	Design	Ave	Design	
Copper	3,415.5	7,199.3	3,324.2	6,136.9	pounds per year
Zinc	10,867.4	22,906.9	7,123.2	13,150.5	pounds per year
Lead	310.5	654.5	166.2	306.8	pounds per year
Cadmium	31.0	65.4	42.7	78.9	pounds per year
Arsenic	310.5	654.5	474.9	876.7	pounds per year
Mercury	DATA CONSIDERED UNRELIABLE				pounds per year
Phthalates	642.7	1354.8	2611.8	4821.9	pounds per year

Etc

*Based on current draft West Point NPDES Fact Sheet
**From Trim et al, 2008, based on the Fact Sheet for the 2005 Renton NPDES permit

Industrial dischargers. According to the draft Fact Sheet for the West Point permit, 64 industrial users discharge industrial wastewater to the West Point system. Over the past decades, many industrial users have redirected their waste from direct discharges to the Sound and Seattle's rivers and instead send their waste to the King County system. In year 2007, West Point received an estimated daily flow of 860,000 gallons per day of wastewater from industrial sources. According to People For Puget Sound analysis, this load of industrial waste alone is a greater volume of wastewater than is received in total flows (domestic, commercial and industrial) for each of 57 other sewage treatment plants in the Puget Sound basin.[8] This is a significant source of toxic chemicals to the facility. In addition, the system serves many hospitals, universities and biotech companies that may be contributing significant amounts of emerging chemicals of concern. As noted in the next section, this large industrial wastewater load is of particular concern because of the combined sewer overflows.

King County operates a pretreatment program for these industrial users. Unfortunately, the amount of sampling in the sewer line is minimal and there is no current effort to "track sources" in the line. That is to sample the lines for toxic chemicals and then work up the various branches of the system in order to determine where higher levels of certain chemicals are concentrated and then to track down the specific sources.

Combined Sewer Overflows (CSOs). In addition to the industrial load of toxic chemicals into the facility that contributes to pollutants discharged through the West Point outfall, significant contributions come from street runoff because the system is combined. King County and Seattle together operate the largest system of combined sewer overflows in Puget Sound. Despite major improvements over the decades, too many of these facilities continue to overflow untreated sewage and industrial waste into the Duwamish River and Puget Sound.

The King County system has the 2nd largest number of combined sewage outfalls in the Puget Sound basin with 38 combined sewer overflow (CSO) outfalls plus 4 CSO treatment facilities. The City of Seattle has the largest number of outfalls (88) and these are connected into the same system. All of these outfalls – King

[8] Trim, et. al., 2008

County and City of Seattle outfalls - are designed to discharge untreated wastewater when storm conditions overwhelm the West Point facility's capacity (a small portion of flows from the combined sewer system is treated at the Renton facility).

As noted in the draft West Point Fact Sheet, the average annual untreated CSO volume from the King County outfalls was approximately 665.5 million gallons per year (2000-2007 data). In the 2007-2008 water year, the annual untreated CSO flow was 815 million gallons (87 untreated CSO discharges) according to King County's CSO annual report (*2007–2008 Annual Report*, dated October, 2008). People For Puget Sound is concerned that there will be an increasing trend of overflow volumes if global climate change causes more intense rain storms as predicted by University of Washington's Climate Change Group researchers. The figure below (from King County, 2008) shows that overflow volumes have increased in each of the past three years, in spite of increased CSO capital improvements to reduce overflows.

Because of the large load of industrial waste in this system, these CSO outfalls as well as those owned by the City of Seattle are a huge problem. CSO outfalls are associated with most of the Superfund sites in Elliott Bay and the Duwamish and a large number of contaminated areas in the Ship Canal and other areas. The contaminated sediments in these areas are only partially cleaned up and the continuing discharge of toxic chemicals from these CSO outfalls is a major concern. Source control/pollution prevention for these sources as well as others has been listed as a needed action in the Puget Sound Partnership Action Agenda that was adopted on December 1, 2008.

King County CSO Control Plan. Because government agencies and businesses are soon to spend millions of dollars to clean up the Duwamish River and other areas as part of cleanup projects, we need to prevent and address the water quality impacts from these CSO facilities. Currently, King County has placed the control of the Duwamish CSO facilities last in their prioritization plan. They won't be completed until 2027. King County staff submitted the 2008 King County CSO Control Plan to Ecology as part of the NPDES application but did not, to our knowledge, conduct public review for that plan nor did they submit it to King County Council for a vote. People For Puget Sound believes that this plan should have been properly reviewed and voted upon before it was submitted as part of the application package because it is a required component of the NPDES permit.

Since the schedule was established, the lower Duwamish River has been listed as a federal Superfund (CERCLA) and Washington State MTCA site, and the Washington State Department of Health has issued a consumption advisory (= no consumption) for resident fish from the Duwamish River. The environmental and human health risks of contaminated sediments in the Duwamish River – including at the outfall of several CSOs – and the need to protect the public's investment in cleanup (which has already begun) requires a re-evaluation and acceleration of CSO controls for the river. The existing schedule – reaffirmed in the 2008 CSO "Update" submitted with King County's NPDES permit renewal application, does not acknowledge or address these developments, and fails to adequately protect public health in some of Seattle and King County's most exposed and vulnerable communities.

The King County CSO Update submitted with the permit application is essentially the same as the previous/ existing CSO control plan and does not satisfy the requirements of an update. We agree with BJ

Cumming's comment letter (DRCC) that using this unchanged "update" submitted as the basis for the compliance schedule is inappropriate - no CSO reductions will be required during the pending 5-year NPDES permit cycle. Major CERCLA/MTCA cleanup efforts are underway along the Duwamish River and at Harbor Island. The lack of action for these CSO outfalls allows the continuation of a significant human health (including environmental justice issues) and wildlife health threat. In addition, these unacceptable overflows threaten the millions of dollars (including State and Federal funds) worth of cleanup efforts.

EPA Compliance Inspection. In addition, USEPA conducted a major compliance inspection of the King County and Seattle CSOs in January and March last year in preparation for the West Point NPDES permit renewal. These reports have not been made available to the public. People For Puget Sound believes that these compliance reports are a required component of the NPDES permit and therefore should be submitted for public review before the permit can be renewed.

Sludge (biosolids). USEPA released a survey report the survey of 74 sewage treatment plants (Targeted National Sewage Sludge Survey, January 2009). As stated on EPA's web page (http://www.epa.gov/waterscience/biosolids/tnsss-fs.html), the survey found that:

- "Nitrite/nitrate, fluoride and water-extractable phosphorus were found in every sample.
- 27 metals were found in virtually every sample, with one metal (antimony) found in no less than 72 samples.
- Of the six semivolatile organics and polycyclic aromatic hydrocarbons, four were found in at least 72 samples, one was found in 63 samples, and one was found in 39 samples.
- Of the 72 pharmaceuticals, three (i.e., cyprofloxacin, diphenhydramine, and triclocarban) were found in all 84 samples and nine were found in at least 80 of the samples. However, 15 pharmaceuticals were not found in any sample and 29 were found in fewer than three samples.
- Of the 25 steroids and hormones, three steroids (i.e., campesterol, cholestanol, and coprostanol) were found in all 84 samples and six steroids were found in at least 80 of the samples. One hormone (i.e., 17a-ethynyl estradiol) was not found in any sample and five hormones were found in fewer than six samples.
- All of the flame retardants except one (BDE-138) were found in nearly every sample; BDE-138 was found in 56 out of 84 samples."

King County currently uses their biosolids to create compost and to spread in farms and forests. We believe that the handling of biosolids from West Point and Renton should be re-examined in light of the USEPA study as well as numerous other reports of the potential harm to workers (handling the material), residents near the biosolids spreading areas who may be impacted by dust generated off the biosolids, terrestrial animals in direct contact with the material, and aquatic organisms impacted by stormwater runoff and groundwater that may be contaminated by biosolids.

Spices as indicators of extent of pollution. University of Washington oceanographer Rick Keil, his students, and citizen groups have recently documented that spices ingested by humans, especially during holiday seasons, are detected in the Central Puget Sound Basin. Cinnamon, for example, doubled in the Sound the day after Thanksgiving 2009 and spiked four days later. These spices can be considered an indicator for the influence zone of sewage effluent.

Sediment sampling. In response to permit requirements, King County conducted sediment sampling around the West Point outfall. In 1996, 1998, 2000, 2006 sediment samples included hits in some years that exceeded sediment management standards (SQS) for a few chemicals, some samples failed toxicity tests, and low biotic abundance and diversity was found at some stations. No tissue samples have been assessed for bioaccumulation. Also, the approach is to discount the multiple chemicals that each individually is below standards.[9]

Ecology and USEPA studies.
A number of studies relevant to the West Point discharges are underway in Puget Sound including:

- South Sound Dissolved Oxygen Study (described above) (http://www.ecy.wa.gov/puget_sound/dissolved_oxygen_study.html)
- Puget Sound Dissolved Oxygen Modeling Study (described above)
- AKART Study (described above)
- Control of Toxic Chemicals in Puget Sound (http://www.ecy.wa.gov/programs/wq/pstoxics/index.html). This series of studies assesses toxic loadings to the Puget Sound basin from 10 pathways, included treated wastewater and combined sewer overflow systems. Some of the relevant studies that are underway now include:
    - Emerging chemicals and Pharmaceuticals Study.
      Ecology is conducting a study to characterize levels of and look at treatment effectiveness for pharmaceuticals personal care products in wastewater and biosolids (sludge) for four WA-related facilities: Chambers Creek WWTP (activated sludge secondary treatment), Puyallup WWTP (activated sludge secondary treatment with nitrification/denitrification), LOTT (tertiary treatment to remove nutrients (nitrogen)), and Hayden, Idaho (tertiary treatment - chemical addition and filtration - to reduce nutrients (phosphorus)). The study will be completed in June 2009.[10]
    - An evaluation of priority toxic chemicals ¬ due in 2009 ¬ will report on the concentrations of toxic compounds released by treatment plants.

There is no mention of these important studies in the West Point permit or fact sheet and as we describe below, these studies should be included and the results of these studies should be used as triggers for action by this discharger. Other NPDES permits in other parts of the United States include relevant studies and triggers for action when the studies are completed, if warranted.

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[9] King County. 2007 (September). West Point Treatment Plant. 2006 Outfall Sediment Sampling Event. Prepared by Scott Mickelson.

[10] WA Dept Ecology. 2008 (August). Pharmaceuticals and Personal Care Products in Wastewater Treatment Systems. Quality Assurance Project Plan. By Brandi Lubliner and David Ragsdale. Publication Number 08-03-112

Ecology's Response to General Comments

1. ***Permit renewal extension.*** We request that Ecology delay renewing the West Point NPDES permit until the public has had an opportunity to review the USEPA CSO Compliance Inspection Report as well as the King County CSO Plan (through a King County process, including a Council vote). These are required components of the NPDES permit**.**

   Ecology's Response*:* The EPA's field investigation of the County's CSO system was not part of the NPDES permit renewal process. EPA initiated the field investigation as part of a national strategy to control CSOs. Ecology had no direct involvement with EPA's CSO inspection; we were involved in an observer role only during the investigation. If an enforcement action is taken by EPA, it will be an action that is outside the NPDES permit.

   In accordance with the permit requirements, King County submitted their 2008 CSO Control Plan Update as part of their permit renewal application. The 2008 CSO Control Plan Update was made available to the public on the County's webpage in July 2008. Ecology understands that there was much stakeholder involvement preparing this document prior to its finalization. The 2012 CSO Control Plan Update may address some of the Duwamish CSO projects and will be reviewed and approved by the County council in 2011. The County is committed to and welcomes public comment during the development of the 2012 CSO Control Plan Update.

2. ***Permit is not in line with Governor's Puget Sound Initiative***. In light of the recently adopted Puget Sound Partnership Action Agenda and the Governor's Initiative to restore the health of Puget Sound by 2020, we are disappointed that the West Point draft permit does not include the critical components to put the facility on a path towards a potentially needed upgrade from Secondary to Tertiary treatment, address toxic chemical loads as well as pharmaceuticals and endocrine disrupters, phasing out mixing zones, planning for increased reclaimed use, and more aggressively reduce the toxic loading associated with combined sewer overflows. In order to do this, the permit should include specific requirements, including:

   a. *Begin planning for tertiary treatment.* Trigger language is needed in the permit, describing Ecology's current nutrient-related studies and requiring action on the part of King County, if West Point is shown to be causing harm. These first steps need to be conditionally required in the permit now in order to allow for the next action steps in the next permit renewal (5 years from now). The permit should provisionally require a comprehensive feasibility study of upgrading to tertiary. In order to facilitate this study, we request that Ecology include a requirement that King County convene a stakeholder group within 6 months of the conclusion of the studies, if actions are needed, to work with Department of Ecology staff and stakeholders to develop all of the needed studies, including options of developing satellite plants or other mechanisms, upgrading the treatment capabilities at the West Point facility, and potential reclaimed uses. These preliminary reports should be required with dates certain in the permit (in month or year increments from the conclusion of Ecology's studies). The next steps in the 2014 permit will include a draft facility plan, Environmental Impact Statement, request for federal funding, and more.

Ecology's response:
Refer to added Special Condition S19 in the permit to address possible outcomes of the South Sound Dissolved Oxygen Study and the Puget Sound Hydrodynamic Modeling.

b. *Reducing mixing zone for toxic chemicals.* People For Puget Sound requests that Ecology include a requirement that King County do an assessment of reduction of mixing zone for toxic chemicals including steps needed to reduce it further in the next permit cycle (2014). In addition, Ecology should better explain (in the Fact Sheet) the current size of the mixing zone that is being used for each toxic chemical of concern. Overall, People For Puget Sound believes that mixing zones should be phased out for West Point outfalls for toxic chemicals.

Ecology's response: Mixing zones are allowed under Washington's rule WAC 173-201A. Ecology applies a mixing zone to the overall discharge and not to individual pollutants. The water quality standards do not require mixing zones for individual pollutants. The size of the mixing zone is set in regulation. Please refer to WAC 173-201A-400. If AKART has been applied to a pollutant or a group of pollutants and that pollutant or group of pollutants still exceed water quality criteria, a mixing zone is authorized.

From January 2004 to April 2008 at West Point's WWTP, there were about 1,700 effluent tests for priority or toxic pollutants, covering about 200 pollutants. None of the detected priority pollutants were found at a level that would have a potential to exceed the water quality standards outside the mixing zone. Moreover, all of the detected priority pollutants, except for copper, met the water quality standards at the end of pipe (i.e. without any dilution).

c. *Endocrine disrupters.* People For Puget Sound requests that Ecology include monitoring of emerging chemicals including pharmaceuticals (at a minimum, the chemicals currently being assessed in Ecology's study), PBDEs and additional chemicals that were detected in King County's surface water study. in the new permit and a requirement to develop a plan to address reduction of pharmaceuticals, endocrine disrupters and other emerging chemicals of concern through source control and/or treatment.

Ecology's response: Ecology is conducting a study to evaluate pharmaceuticals and personal care products (PPCPs) in wastewater. Ecology issued a Quality Assurance Project Plan for monitoring pharmaceuticals and PPCPs and nutrients in the influent, effluent, and biosolids from four municipal wastewater treatment plants. The four selected facilities offer different types of wastewater treatment methods as well as varying levels of treatment.

The purpose of this effort is to (1) characterize the concentrations of the contaminants entering the wastewater treatment systems, (2) assess the extent to which the contamination is treated in each facility, and (3) compare contaminant removal between wastewater treatment technologies. This work is funded through a grant from the U.S. Environmental Protection Agency, the Puget Sound Partnership, and the Washington State Department of Ecology. At this time, Ecology is not putting requirements for EDC testing in individual permits.

d. *Source detection and reduction of toxic chemicals in the system.* People For Puget Sound requests that Ecology include stronger requirements to develop and implement a plan to reduce toxic chemicals through significantly improved source detection and convene a stakeholder group to review the needed study and results. Specific sampling for source tracing up the sewer lines, starting at a coarser scale and refining as the study narrows in on chemicals of concern is needed. In addition, we request that the permit include requirements for public education to help reduce loads of specific toxic chemicals of concern. This approach is taken for San Francisco Bay NPDES permits for sewage treatment plants and would be appropriate here.

Ecology's response: As discussed in response 2b, none of the toxic pollutants tested for in the West Point WWTP's effluent had a reasonable potential to exceed the water quality standards. Additional toxics testing, in the form of whole effluent toxicity, revealed that it is unlikely for the West Point WWTP's effluent to cause fish toxicity at the outfall. Based on toxics testing results, additional requirements for toxics monitoring are not warranted at this time.

e. *Reduce combined sewer overflows, with focus on toxic chemicals.* People for Puget Sound requests that Ecology include that King County work with USEPA, Region 10 and a stakeholder group to develop a plan to reduce combined sewer overflows with a focus on water quality rather than the continued focus on water quantity. In addition to treatment options, People For Puget Sound advocates that stormwater should be retained onsite at source properties (green stormwater infrastructure) as a priority and that clean water (i.e., roof runoff) should be kept separate from dirty (i.e., street runoff) in retrofits and new development.

Ecology's response: By limiting the volume of the CSO discharges, the County is in effect improving water quality. The current regulatory framework for CSO control allows for stakeholder participation. In addition to traditional CSO control strategies, Ecology encourages the use of green infrastructure for controlling CSOs. Green infrastructure is generally more applicable at the local level (i.e. City of Seattle) rather than at the regional level (i.e. King County).

3. ***Significant change in permit not well explained or justified.*** The calculations for reasonable potential for toxic chemicals is significantly changed in this permit due to revised ambient data and dilutions but this information is not clearly articulated nor are the ramifications well described so that the public has a clear understanding of the impact of this change. In the "Summary of Changes from the Previous Permit" in the Fact Sheet, this major change is not described except to note that the residual chlorine limit has changed. Increasing the dilution factor results in a number of toxic chemicals not being given permit limits either in this permit or in the future if input loads of those chemicals rise. Dilution factors for West Point have proposed to increase from 153:1 to 181:1 for chronic conditions for aquatic life and from 153:1 to 330:1 for chronic conditions for human health (both carcinogen and non- carcinogen), etc. The dilution factors are decreased for the CSO treatment facilities but they are a significantly smaller portion of the toxic chemical load relative to West Point which is the largest contributor in Puget Sound. A change of this magnitude should be fully explained and justified. Instead, in the Fact Sheet, the text states that (p. 64), "King County determined the dilution factors that occur within these zones..." In other words, no Ecology analysis is included to double check with the methodology or the assessment that King County presented. The outfalls and ambient conditions in Puget

Sound did not change appreciably between the time of issuance of the previous permit (2003) and today and so the new numbers are based on new assessment. This assessment deserves a full and transparent public review and therefore we request that King County's study be posted on the web and that it be explained in the Fact Sheet.

Ecology's response: Ecology provided a very thorough review of the County's data, dilution factors, and modeling in August 2008 and January 2009. At the informal public meeting on January 27, 2009, Ecology explained in detail the changes associated with all of the dilution factors. In summary, the dilution factor revisions were due to 1) new and improved computer models, 2) closer ambient monitoring stations to each outfall; and 3) more accurate effluent flow data. The dilution factors in the proposed permit are more up-to-date and representative than in the previous permit. The fact sheet has been revised to include more information regarding the revisions to the dilution factors. In regard to toxic chemicals in West Point WWTP's discharge, all of the detected pollutants, except copper, met the water quality standards, without any dilution.

4. ***Triggers based on studies and initiatives***. Ongoing state and federal initiatives and studies, including the Puget Sound Partnership Action Agenda, should be included in permit and fact sheet and referenced with application to requirements in permit. In other States, this information is included in NPDES permits.

   For example, the City of Los Angeles (CA0053953) Los Angeles-Glendale Water Reclamation Plant NPDES permit includes:

   > Watershed Approach - This Regional Board has been implementing a Watershed Management Approach (WMA), to address water quality protection in the Los Angeles Region, as detailed in the Watershed Management Initiative (WMI). The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science. Information about the Los Angeles River Watershed and other watersheds in the region can be obtained from the Regional Board's web site at http://www.waterboards.ca.gov/losangeles/html/programs/regional_programs.html# Pursuant to this Regional Board's watershed initiative framework, the Los Angeles River Watershed Management Area was the targeted watershed for fiscal year 1999-2000. However, the NPDES permit renewals were originally re-scheduled for the 2003-2004 fiscal year so that provisions of the CTR and SIP could be incorporated into the permits. However, delays in the renewal were caused by lengthy litigations. [http://63.199.216.6/larwqcb_new/permits/docs/5675_R4-2006-0092_WDR.pdf]

   The Hyperion permit (Los Angeles) includes a requirement for the City of Los Angeles to consult annually with the Regional Board and the United States Environmental Protection Agency (USEPA) to determine the "need for Special Studies. Detailed scopes of work for proposals shall be presented to obtain Regional Board and USEPA approval and inform the public. Special Studies are intended to focus on refined questions regarding specific effects or development of monitoring techniques. Questions regarding effluent or receiving water quality, discharge impacts, ocean processes in the area of the discharge, or development of techniques for monitoring the same, arising out of the results of core or regional monitoring, may be pursued through these Special Studies [order]."

Ecology is conducting a South Sound Dissolved Oxygen Study, a Puget Sound Dissolved Oxygen Study, an AKART analysis, and studies of emerging chemicals of concern, including pharmaceuticals. All of these studies, which will conclude by 2010 at the latest, have relevance to the West Point permit and should be included in the fact sheet (briefly described) and should be included in the permit as triggers. If these studies show that West Point is contributing to harm to Puget Sound, then actions should be initiated at that time, rather than waiting till the next five-year renewal year.

We believe that Ecology is legally required to conduct an AKART analysis as part of this permit renewal. We urge that Ecology, at the very least, include a provision in the permit that should the ongoing Ecology AKART analysis study determine that AKART constitutes a level of treatment greater than what is currently employed at West Point, that an Engineering Report be completed in this permit cycle.

Ecology's response: Fact sheet information is specific to the permit and we do not typically mention regional or statewide studies in individual fact sheets. Special Condition S19 has been added to the permit to address possible outcomes of the South Sound Dissolved Oxygen Study and the Puget Sound Hydrodynamic Modeling.

Ecology's Response to Specific Comments

Permit

1. **S1D and E. CSO Treatment Facilities.** People For Puget Sound requests that the requirement be modified to establish a limit on the long term average discharge for this permit cycle as specified in WAC 173-245-090(1)(a)(ii) "the total treated and untreated annual discharge from an at-site treatment plant may not be increased above the baseline annual."

   ***Ecology's response*:** Permit Section S1.D and S1.E address the effluent limits associated with the Elliott West CSO Treatment Plant and the MLK/Henderson CSO Treatment Plant, respectively. Unlike the Alki and Carkeek CSO Treatment Plants, which were originally primary WWTPs, volume and discharge event criteria weren't developed for these facilities.

2. **S2A.6. CSO Outfalls Monitoring.** People For Puget Sound requests that this requirement be modified to include monitoring of "controlled" outfalls (quality not just quantity) and that the permit be modified to require demonstration that the discharges from "controlled" CSO outfalls be in accordance with WAC 173-245-015, meeting numerical standards, not limiting the characteristic uses and not accumulating sediments.

   ***Ecology's response*:** In the draft permit, Section S2A.6 refers to CSO outfalls that are not associated with CSO Treatment plants. Special Condition S18.K.3 requires post-construction monitoring for controlled CSOs including evaluating water quality impacts. It is stated, "The Permittee must implement a post construction compliance monitoring program adequate to verify compliance with water quality standards and protection of designated uses as well as ascertain the effectiveness of CSO controls. This water quality compliance monitoring program must include a plan that details the monitoring protocols to be followed, including the necessary effluent and ambient monitoring and, where appropriate, other monitoring protocols such as biological assessments, whole effluent toxicity testing, and sediment sampling."

3. **S6.E. Source Tracking Characterization**. We are pleased that Ecology has included our request to require King County to begin the process of looking at sources of toxic chemicals in a more systematic way. At this point, King County does not have an inline characterization of the toxic chemical loads in each section of their system (i.e., areas in the system where lead, mercury, phthalates, etc. have higher concentrations) and so does not know where the problems are in terms of being able to reduce sources of toxic chemicals to the facility.

   Ecology has included the following requirement in the draft permit:

   > "In order to more fully characterize industrial discharges, the Permittee must conduct a pollutant analysis for metals, cyanide, phenols, volatile compounds, acid compounds, and base/neutral compounds, as described in Appendix A, of at least one industry in each of the metal-finishing/electroplating, centralized waste treatment, and food processing categories. The results of the analysis must be included with the permit renewal application."

   Our concerns are:

   a. One report – due December 31, 2012 – is inadequate. We request that Ecology request that a source tracing plan be submitted by November 1, 2009 and that a yearly progress update be due by June 1 of each year of the permit cycle. Furthermore, the plan and progress reports should be sent to interested stakeholders, including People For Puget Sound by King County.

   b. An analysis of only one industry in each of three industrial categories is inadequate. People For Puget Sound requests that the study include at least 15 industries and that they be selected in a statistically valid manner.

   c. Our key goal in requesting this study in the first place was that the sewer line itself be tested, branch by branch. This proposed S6.E.study does not include that key requirement and we request that it do so.

   ***Ecology's response*:** In General Comment #3 above, People For Puget Sound indicated that CSO treatment facilities are a significantly smaller portion of the toxic chemical load relative to West Point. The toxicity testing results of West Point WWTP's effluent indicated that there were no reasonable potentials to violate water quality standards for toxics and that the WET tests concluded that it is unlikely for this discharge to cause toxicity in fish. Based on testing, it does not appear that toxicity is an issue in West Point's discharge. King County relies on their Industrial Waste Program (KCIW) to regulate permitted and authorized discharges from significant industrial users (SICs). Ecology has delegated pretreatment authority to King County and inspects their program annually.

4. **S12 Receiving Water Study (QAPP).** People for Puget Sound requests that this study include organic chemicals including phthalates.

   Ecology's response: The purpose of the receiving water characterization (S12) is to provide ambient data to determine if the effluent has a reasonable potential to violate the water quality standards. For pollutants detected in the effluent, background data for those detected pollutants must also be provided. This would include phthalates, if they are detected in the effluent and have a numeric water quality criteria. The ambient parameters will be reviewed by Ecology as part of the QAPP process.

5. **S12. Receiving Water Characterization**. Please explain and rectify the following:

   Page 44, S12.C. What is logic of only sampling outside the "zone" of influence?
   Ecology's response: This is an attempt to obtain a true, representative sample of background conditions – outside of the influence of the outfall.

   Page 44, S12.H. Why are toxic organic chemicals not better addressed?
   Ecology's response: Priority pollutant testing indicated that very few toxic organic pollutants were detected in West Point's discharge. Many of these chemicals do not have a water quality standard, so a reasonable potential comparison cannot be made. In these instances, Ecology relies on WET testing to quantify the overall toxic effects of the effluent.

   Page 54, S13.I.3 What is logic of only sampling outside the "zone" of influence?
   ***Ecology's response*:** See above response.

   Page 54, S13.I.8 Why are toxic organic chemicals not better addressed?
   ***Ecology's response*:** See above response.

6. **S18.I.1 CSO Sediment Quality Summary Report.** King County staff has indicated that the CSO sediment characterization report (based only on old data – no new data collected) will be available by the end of 2008. Therefore, People For Puget Sound requests that the required S18.I.1 CSO Sediment Quality Summary Report due date be moved from July 1, 2009 to "two months after permit is reissued," whichever is sooner.

   Ecology's response: By the time this permit is issued, two months will be July 2009.

7. **Sediment Data Report.** The permit states: **"**Following Ecology approval of the Sediment Sampling and Analysis Plan for the CSO outfalls, the Permittee must collect and analyze sediments in the summer of 2011 or 2012. The Permittee must submit to Ecology a Sediment Data Report containing the results of the sediment sampling and analysis no later than January 1, 2013. The Sediment Data Report must conform to the approved Sampling and Analysis Plan." This is too late. People For Puget Sound requests that the requirement be changed to 2010 and that the report be due no later than January 1, 2011.

   Ecology's response: Sufficient time must be made available to the County to prepare and submit a sediment quality summary report as well as a sediment sampling and analysis plan prior to collecting sediments and providing the data report. People For Puget Sound's request does not provide sufficient time to the County to properly conduct their work.

8. **Source tracing**. As described above the requirement for source tracing is not adequate.

   Ecology's response: Refer to Ecology's response #3 above.

9. **Sediment contamination.** Instead of simply requiring more sediment sampling, as has been required again and again in Ecology's permits, it is time to do go to the next level and take the steps to reduce toxic chemicals that are impairing sediment and biota. See comment below for more details.

Ecology's response: The previous sediment studies' results have not been conclusive. Based on the existing information we cannot determine which chemicals are causing bioassay toxicity failures in the sediment near the outfall. In the last round of sediment sampling, all samples were below the chemical numeric criteria. In the past three sampling events (1998-2006), chemical concentrations are generally declining over time. When there were detected concentrations of some chemicals in sediments, they were not detected in the priority pollutant scans of the effluent. Almost all of the benthic toxicity exceedances slightly exceeded the criteria, as indicated in the below table.

Year	Station	Type of test	SQS Limit	Test results that do not meet SQS
2006	WP280W	Amphipod mortality	Not more than 25%	26% mortality
2006	WP280W	Bivalve abnormality	Not less than 85%	Test 80% of reference abnormality
2006	WP280W	Neanthes growth	Not less than 70%	Test 67% of reference growth
2006	WP230P	Bivalve abnormality	Not less than 85%	Test 81% of reference abnormality
2006	WP215N	Bivalve abnormality	Not less than 85%	Test 78% of reference abnormality
2000	WP230P	Echinoderm abnormality	Not less than 85%	Test 80% of reference abnormality
2000	WP230P	Neanthes growth	Not less than 70%	Test 60% of reference growth
2000	WP430N	Echinoderm abnormality	Not less than 85%	Test 12 % of reference abnormality
2000	WP430N	Neanthes growth	Not less than 70%	Test 67% of reference growth
1998	WP230P	Neanthes growth	Not less than 70%	Test 67% of reference growth
1998	WP230P	Echinoderm abnormality	Not less than 85%	Test 16% of reference abnormality
1998	WP430N	Echinoderm abnormality	Not less than 85%	Test 79% of reference abnormality
1998	WP230P	Chemistry (detected chemicals)		Pyrene, phenanthrene, Benzo(g,h,i)perylene, fluoranthene, Indeno(1,2,3-c,d)pyrene,

However, we are recommending several additional types of monitoring to investigate the source of toxicity and how it may be changing over time. Besides chemical analysis and suites of bioassays at 8 stations, we are requiring:

- Adding additional stations to the northwest of the diffuser end to determine the areal extent of contamination.
- Performing chemical analyses on the top 2 cm and top 10 cm at three stations to determine if the contamination may be increasing or decreasing over time.
- If the samples fail bioassays, performing sediment toxicity investigations to determine the cause of the toxicity.
- Additional monitoring of the effluent during storm events.
- Additional investigations of the effluent, if needed, to determine if and when suspended sediment in the effluent may be toxic.

10. **Bioaccumulation and biomagnification.** People For Puget Sound requests that the permit include requirements for a bioaccumulation and biomagnification of toxic chemicals in fish tissue in the vicinity of the outfall.

    ***Ecology's response*:** It is difficult to determine and differentiate the effects of this discharge from all other point and non-point sources of contaminants near the outfall. At this time, Ecology does not have the tools and criteria to move forward with this type of evaluation. Ecology believes that WET testing is an appropriate tool and that there is a legal basis for requiring this test in the permit.

11. **Pretreatment**. The permit or the Fact Sheet should list in an appendix the name and type of industry for each pretreatment facility.

    ***Ecology's response*:** An appendix has been added to the fact sheet listing the name and type of industries that discharge into the County's conveyance system.

12. **Mixing zone description.** Rather than quoting all of the details from the WAC, it would be much clearer to the public if the permit referenced the WAC and then included schematic diagrams of each mixing zone. Please include schematic plans of each mixing zone.

    Ecology's response: The language that is included in the permit is standard language for mixing zones in all permits statewide. It is included to provide consistency among permits. Diagrams for the mixing zones have been added to the fact sheet.

13. **Public review of key documents - Receiving Water Characterization.** This document should be sent out to stakeholders at the time it is sent to Ecology. Please include that requirement.

    Ecology's response: The Receiving Water Characterization consists of data that will be used in the reasonable potential analysis. Ecology is willing to forward this data to People For Puget Sound. Ecology does not believe that this needs to be included as a permit requirement.

14. **S14. Outfall Evaluation**. People For Puget Sound request that this requirement be modified to include inspection and condition assessment of all CSO outfalls. In addition, we request that this section be expanded to require repair or replacement of defective or damage outfalls that are not function at the intended design-levels.

    Ecology's response: Special Condition S14 is a requirement to inspect the West Point WWTP's outfall only. It does not include inspection of CSO outfalls. The County has 42 outfalls including the West Point outfall. Many of the CSO outfalls discharge very infrequently. All of the outfalls, except West Point's, Alki's and Carkeek's outfall, do not include diffusers. They are pipes that have an opening at the end and therefore do not have diffusers or associated design criteria. Requiring the County to inspect all of their outfalls does not seem to have much environmental benefit as they are just pipes.

15. **S18. CSO – general comment.** People For Puget Sound requests that this requirement be modified to identify what is required when an outfall(s) exceeds the five overflows in five years performance criteria.

Ecology's response: When a permittee does not meet a permit requirement, Ecology evaluates various enforcement mechanisms. Each violation is handled on a case-by-case basis. Since each violation is evaluated individually, additional language is not necessary at this time.

16. **Addressing CSOs for wildlife health**. People For Puget Sound believes that the CSO flows that include toxic chemicals must be reduced with a greater priority being placed on wildlife health and toxic chemical-related water quality. The previous planning strategy was based on human health and those goals have largely been met. At this point, with more and more evidence pointing to bioaccumulation of toxic chemicals in the food web as well as degradation of biotic communities due to toxic chemicals in CSO flows, aggressive source detection and source reduction is imperative. We believe that the regulatory and oversight agencies (Ecology, USEPA, NOAA and now the Puget Sound Partnership) as well as City of Seattle and King County have fallen short in effectively addressing this problem. The listing of Chinook salmon and Southern Resident killer whales has added urgency to the problem and should dramatically increase the priority for decisive action.

    Ecology's response: In General Comment #3 above, People For Puget Sound indicated that CSO treatment facilities are a significantly smaller portion of the toxic chemical load relative to West Point. CSOs may have an impact but there are many point sources (stormwater outfalls, direct industrial discharges, other municipal WWTP outfalls, other non-King County CSO outfalls) and non-point sources (agricultural runoff, residential runoff, etc.) that discharge to Puget Sound. Ecology is working diligently to address these other inputs to Puget Sound. The proposed permit includes a compliance schedule to reduce CSO flows into Puget Sound.

17. **Real time notification of CSO events**. In the last permit, People For Puget Sound requested that CSO notification to the public be significantly improved in order to meet USEPA's requirement of "Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts." While we think the new real time web page is good, it requires that the public both be aware of the web page and be pro-active by going to a web page in order to find out information. In addition, the web page does not include a feature that allows the viewer to quickly get a history of the discharges from each outfall. Finally, the web page is not integrated with Seattle's CSO outfalls information, which, to the public, is all part of the same confusing system. To remedy these problems, we request that the following be required:

    a. Create a CSO email alert system to allow interested public to sign up to receive emails alerting them when CSOs are overflowing. The alert could be customized to allow interested public to sign up to be alerted when any CSO is overflowing or just when CSOs in their sector of the city are overflowing.

    b. Add popup boxes for each CSO outfall on the web map so that a brief history of overflows at that outfall can be described. This would allow an interested member of the public, who might, for example, routinely kayak or fish in that location, to see the likelihood of overflows at that outfall when it rains. It is not reasonable to expect that a member of the public has to dig through long annual reports to try to figure out the information for each outfall.

    c. The City of Seattle and King County should integrate their CSO notification programs (since it is one interconnected system) for the purpose of better information for the public and cost savings by creating a more efficient system.

Ecology's response: Public notification actions have no direct effect on reducing overflows and pollutant loads from CSO systems, or on minimizing water quality impacts. Ecology believes that the County has already met the requirement for public notification through their web-based program. Ecology feels that limited public resources are better used to control CSOs than to provide additional public notification mechanisms. The City of Seattle is planning on providing a web-based notification program with links to the County's web page. The County is also planning on having a link on its webpage to the City's webpage, thereby making these two CSO programs inter-linked. In regard to the annual reports, this is required by Washington rule. The proposed permit requires monthly CSO reports. The public can request and review these monthly reports.

18. **CSO signage and warning lights**. We would appreciate seeing some photos of the new warning signage for CSO outfalls. Please include these in the response summary. Our concern remains, however, that large warning signs are not in place so that they can be seen from the water (i.e., by a kayaker in the Duwamish) and that warning lights have not been installed at appropriate places. Given that King County's own report shows bacteria levels following a CSO event could remain high enough to present an exposure health risk for 24 to 48 hours at some locations (King County, 1998. CSO Water Quality Assessment of the Duwamish River and Elliott Bay), we feel that warning lights and better signs are needed.

    Ecology's response: Refer to Ecology's response to Comment #17. For a picture of a CSO warning sign, please refer to the following link.
    http://www.kingcounty.gov/environment/wastewater/CSO/Program/NotificationPostings.aspx

19. **Lack of information about CSO treatment volumes**. This information should be included in the Fact Sheet.

    Ecology's response: In the draft permit, CSO treatment volumes were included in Table 9 (Alki CSO treatment plant), Table 12 (Carkeek CSO treatment plant), and on page 36 in the narrative text for MLK/Henderson CSO treatment plant. CSO treatment volumes for Elliott West CSO treatment plant have been added to the fact sheet.

20. **CSOs – enforcement.** Given that King County has determined that the risk of infection from Giardia and viruses due to CSOs will be eliminated (King County combined Sewer Overflow Water Quality Assessment for the Duwamish River and Elliott Bay, King County 1999) and that Ecology has listed most of the CSO-related waterbodies in Seattle (Lake Washington, Duwamish, etc) as impaired for fecal coliform on the 2008 proposed 303d List, how is it that the NPDES permit allows discharges of untreated CSOs that are in violation of water quality standards or are causing an impairment? What enforcement actions will Ecology use to ensure that discharges from "controlled" CSOs do not cause or contribute to an adverse impact of the designated uses?

    Ecology's response: In the draft permit, Ecology has established a compliance schedule to ensure that King County makes necessary CSO corrections to meet the water quality standards. For controlled CSOs, Ecology can take a number of enforcement actions (warning letters, orders, penalties, etc.) to ensure that controlled CSOs don't cause or contribute to adverse impacts to designated uses.

21. **CSO Reduction Projects.** Page 52. People For Puget Sound requests that Ecology include a requirement that King County must demonstrate how proposed projects will attain both numerical and narrative water quality standards and how the project may be modified to reduce loads when TMDLs are issued for each of the impaired waterbodies.

    Ecology's response: An explanation of how proposed CSO control projects meet the numeric and narrative water quality standards is given in Engineering Reports. During the planning phase of a CSO Control project, Ecology will notify the County of a possible TMDL of an impaired water body, so that steps can be taken to proactively address water quality issues.

22. **Permit and Fact Sheet Changes.** Rather than just relying on a brief summary of changes presented at the beginning of the Fact Sheet, we request that the existing permit and Fact Sheet be retained on Ecology's web page in order for the public to see the changes being proposed. Ideally, Ecology should provide the draft permit in a strike-out mode as is the custom for most regulatory changes. We happened to have electronic versions of the existing permit and therefore were able to make some comparison but the general public would not have this ability other than having to drive to Ecology's office to conduct a file review (which is inconsistent with Ecology's goal of addressing climate change).

    Ecology's response: Ecology has plans to provide existing and proposed draft NPDES permits and fact sheets on our website. Providing a draft permit with tracked changes mode would be confusing as the permit and fact sheet templates change considerably over time. Ecology did not receive any public requests to review the previous permit. Upon request, Ecology will e-mail any permit and associated fact sheet. Copies of permit can be requested by calling 425-649-7000.

23. **Archive.** In addition, all electronic permits should be available on Ecology's web page in an archive as they are already available in an electronic form and this would not require scanning or other efforts by staff.

    Ecology's response: Ecology Headquarters will make existing and proposed draft NPDES permits and fact sheets be made available on our website. Ecology's does not plan to archive older versions permits at this time.

24. **Mailing list.** Stakeholder and interested persons list for permit should be added as an appendix

    Ecology's response: An appendix has been added.

25. **Water reclamation**. People For Puget Sound requests that a statement in favor of water reclamation be included in the permit (or Fact Sheet). We have been engaged for the last several years in comprehensive nearshore restoration planning through a federally authorized study, the Puget Sound Nearshore Ecosystem Restoration Project. The outputs of this analysis are emerging in the next few months suggesting the need to restore barrier estuaries which were once much more common on the landscape. West Point's unique location, geologic structure and a potential source of freshwater, should the effluent be treated to reclaimed water standards, would make for a perfect restoration project with high visibility.

Ecology's response: We suggest that People For Puget Sound contact King County directly regarding your project ideas. For off-site uses of West Point's reclaimed water, a reclaimed water permit would be required.

Fact Sheet

1. **General comment**. Overall, the Fact Sheet is improved over previous versions. Much more detail is included about some items, and this is greatly appreciated. Unfortunately, however, there are a number of areas that need to be improved in order for the public to understand the changes in the permit and the basis for decisions.

   Ecology's response: Comment noted.

2. **Factual Basis.** People For Puget Sound would like to see the relevant scientific and policy basis that describes the health of the Central Sound and needed actions listed in the Fact Sheet. For example, as we mention above, the Fact Sheet should reference the recently adopted Puget Sound Partnership Action Agenda. In addition, new studies such as the NOAA study (also mentioned above) that examined the feminization of male English Sole in Elliott Bay should be referenced.

   Ecology's response: The proposed permit and fact sheet are specific to the West Point WWTP and Combined Sewer Overflow system. The above mentioned studies are outside the scope of a fact sheet. The purpose of the fact sheet is to describe the permit's terms and conditions.

3. **Revision to Fact Sheet.** It is not clear as to why Ecology will not revise the draft Fact Sheet, as this document forms the basis of fact for the permit. We are not aware of a regulation that states that the Fact Sheet cannot be revised as a result of public comments prior to finalization of the permit. If there are errors, omissions or improvements needed that are noted by the public, these corrections should be made. In addition, the public review process should be genuine, not token. It is, after all, designated as a draft document in the public review process. Revisions that we believe (at a minimum) should be included are:

   Ecology's response: The fact sheet language regarding revisions is standard language included in all current draft permits. In lieu of fact sheet revisions, explanations or clarifications are made in the Response to Comments. This eliminates duplicating effort in the Response to Comments and in the fact sheet. Typically, if there are errors or omissions in the fact sheet, they are explained in the Response to Comments only. Per your request, Ecology has modified the fact sheet where appropriate.

   a. Page 13: We do not believe that this statement is accurate: "No significant industrial users discharge to the Alki Treatment Plant." The system is interconnected and there are industrial users in West Seattle. The original Alki service area, prior to conversion, may have been residential. Please confirm that this statement is accurate. Also, please define "significant users."

   Ecology's response: The fact sheet should have indicated that under normal circumstances, no significant industrial users discharge to the Alki CSO treatment plant. Due to some storm events, the Alki CSO treatment plant can receive combined sewage that includes some industrial flows. The fact sheet has been revised for clarification.

The term "*significant user*" or *"Significant Industrial User"* is defined in 40 CFR Part 403(2)" *"Except as provided in paragraphs (v)(2) and (v)(3) of this section the term Significant Industrial User means: (i)All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter l, subchapter N; and (ii) Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastewater which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW Treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or requirement (in accordance with 40 CFR 403.8(f)(6))."*

b. Page 15: CSO notification web page is inaccurate. The Fact sheet lists "http://dnr.metrokc.gov/wtd/cso/status/index.html" but the correct web page is different and an interested member of the public would not be able to easily click through. It is also not very easily found on the King County web page.

Ecology's response: Thank you for the correction. The correct webpage is given as: http://www.kingcounty.gov/environment/wastewater/CSO/RealTime/SeattleOverview.aspx
The fact sheet has been corrected.

c. Page 18: Inadequate description of treatment for West Point. The Fact Sheet reads, "For flows above 300 MGD and up to 440 MGD, the treatment process consists of screening, de-gritting, primary sedimentation in clarifiers, disinfection with chlorine in a chlorine contact channel, and dechlorination." This sentence should be made clearer to the reader by including the notation that this is primary treatment – a key distinction that may not be clear to a lay reader. It should also be more clearly stated that this is flow blending, if that is indeed, what it is.

Ecology's response: On Page 19, an entire section is devoted to wet weather operations. It is stated, "The secondary treatment units at West Point are designed to treat flows up to 300 MGD. During severe wet weather conditions, flows to the treatment plant above 300 MGD (instantaneous) and up to 440 MGD are given primary treatment and are then bypassed around the secondary treatment process through the plant's secondary diversion pipeline. The diverted flow is then blended together with the secondary treated flows prior to disinfection before discharged from the plant." In addition, Special Condition S17 of the draft permit, refers to the "CSO-related bypass" and it explicitly explains that in the 300 MGD to 440MGD range, flows are bypassed around the secondary process.

d. Page 23. The description of the West Point outfall is incomplete and a map is needed. It would be clearer to the reader if the description included the length of the pipe to the start of the diffuser, the length of the diffuser including the number of ports, and the type of terminus of the pipe. In addition, the Fact Sheet would be improved by including a close-up map of the outfall pipe, as has been included in other Puget Sound permit Fact Sheets, so that the public is fully informed as to the location and configuration of the

outfall pipe. Similar full descriptions (including diameter and pipe material) and close-up maps should be included for the CSO treatment outfalls. We request that these be included in the Fact Sheet.

Ecology's response: A map and additional information on the West Point outfall has been included.

e. 2007-2008 water year: The West Point Treatment Plant, the Carkeek and Alki CSO Treatment Plants, and the Elliott West and Henderson/Norfolk CSO Treatment Facilities discharged approximately 550 MG of treated CSOs.

Ecology's response: Comment noted.

f. Page 26. Rather than quoting King County's own report, Ecology should use their assessment about biosolids which is available from Ecology Staff rather than taking the approach that is in the Fact Sheet: (emphasis added) "According to the County's 2007 Biosolids Quality Report, biosolids contain water, sand, organic matter, microorganisms, trace metals, and other chemicals. The report states, "Because of their moisture content, humus-like characteristics, essential nutrients for plants, and very low levels of pollutants, biosolids *are beneficial and safe to use* as a soil conditioner, fertilizer for forest trees and agricultural crops, and as an ingredient of composts for landscaping." This sentence should be struck-out if Ecology is unable to provide their own assessment about this highly controversial subject.

Ecology's response: Ecology agrees with the County's assessment. The biosolids information in the fact sheet is provided as a courtesy and for informational purposes only. Biosolids are regulated under WAC 173-308 and not the subject of this NPDES permit.

g. Page 26. The last part of this qualitative sentence also should be revised or stricken: (emphasis added) "The County's West Point biosolids continue to meet quality standards for metals, pathogen reduction (Class B), and vector attraction reduction, which means it is *safe for all land application projects*." Meeting some standards – which themselves have recently been called into question – does not mean that biosolids are "safe" for application. As mentioned above, a number of studies have highlighted some serious concerns about the use of biosolids in land applications across the country, including human health, groundwater and stormwater impacts, especially with regard to emerging chemicals and prions. Please let us know if you would like People For Puget Sound to forward copies of these reports to you.

Ecology's response: Meeting biosolids quality standards allows for them to be land applied. Please refer to Response #3f.

h. Page 27. This table of biosolids characteristics should include values for polynuclear aromatic hydrocarbons (PAHs), phthalates, polychlorinated biphenyls (PCBs), and solvents. Please provide this information.

Ecology's response: Please refer to Response #3f.

i. Page 27, 37, etc. In order for the public to understand the information and to be able to compare this facility to others, all tables in the Fact Sheet that depict quality (wastewater quality, biosolids, etc.) should be revised to provide complete information in a uniform manner in separate columns including:
   i. Number of samples
   ii. Range of values (max, min)
   iii. Average
   iv. Range of dates for samples
   v. Relevant standard

   In addition, the units should be appropriate (for Table 20, it would be more helpful if µg/l were used uniformly). Detection limits should be used rather than "0" for low values.

   Please provide tables with this complete information.

Ecology's response: Ecology believes that the information provided is sufficient in detail. In the future, we will consider your request.

j. Page 29. West Point and the CSO treatment facilities suffered a major disruption during the significant storm event in December 2007. This event is not mentioned in the Fact Sheet. We request that this event be described and included.

Ecology's response: Severe storm events are considered "acts of God" and Ecology typically does not take enforcement actions as a result of these events.

k. Table 9. This table is confusing. Even if an event is "allowed" – that is one overflow per year is allowed, the information should still be included in the Fact Sheet for all events even if they are not included in calculations. It is not clear if all events are reported.

Ecology's response: Comment noted.

l. Page 38 (and similarly on page 39 for Carkeek, page 40 for Elliott West.) The Fact Sheet should include a clause added to this sentence, "The County collected storm samples between December 2 and December 4, 2007, including four flow weighted composite samples and one grab sample" that indicates that this was an extreme event.

Ecology's response: The fact sheet indicates the collection of the samples occurred during a storm event. In this response, Ecology acknowledges that there were severe storms on Dec 2-4, 2007. For some CSO treatment plants, it takes large storm events to produce a discharge and allow for sampling.

m. Page 41. The Sediment Testing section description is incomplete and does not provide adequate information for the public to fully understand the sediment quality status. A map that shows sample locations and sediment quality should be included. Where, for example is site WP230P. Please provide this map.

Ecology's response: A map of sediment sampling stations has been included in the fact sheet. Additional information has been provided in the fact sheet regarding sediment sampling and quality.

n. Page 42. "About 16 of the CSO outfall locations discharge into the Lower Duwamish Waterway Superfund Site or the East Waterway Superfund Site." This number should be clarified – is it 16?

Ecology's response: There are 14 CSO outfall locations that discharge into the Lower Duwamish Waterway Superfund Site or the East Waterway Superfund Site.

o. **Appendix C.** This table should include the range of the samples collection dates. The first page of the table is cut off – so the top of the headers is missing. Also, the number "0" is suspect and it appears to represent detection limits? If so, this should be noted. Metals should be shown in ug/l rather than mg/l.

Ecology's response: Appendix C represents the data submitted on EPA's permit renewal application form. This is a standard form used by all permittees submitting data for the purposes of permit renewal. Concentrations below the detection level should be noted as such. It is unclear the benefit of converting units for metals data. Converting the data can induce error.

p. **Appendix D.** This table is missing row narrative to the left with dates and Max, min. etc.

Ecology's response: In Appendix D, the second page is a continuation of the first page.

q. **Throughout**. Miscellaneous typos and grammatical errors.

Ecology's response: Comment noted.

4. **Transparency and completeness of the Fact Sheet.** It is noted in the King County Annual CSO report (October 2008), that

> "In fall 2007, the U.S. Environmental Protection Agency (EPA) notified the county that its wet weather management programs were going to be audited. Such audits are occurring across the country under a strategy set by EPA's Office of Enforcement and Compliance Assurance (OECA). Agencies are selected to be audited based on their size, population served, and system complexity. The City of Seattle was informed it would undergo a similar audit at the same time. OECA and EPA Region X staff, accompanied by Ecology staff, performed an intensive inspection over five days in early January 2008."

This information should have been conveyed in the Fact Sheet and the results reported. What were the results of this audit? [Please provide the answer in the responsiveness summary.] As we note above, the permit should not be renewed until this information is provided for public review as compliance is a key aspect of the NPDES permit renewal process.

Ecology's response: The EPA Region 10's field investigation of King County's CSO system in January 2008 was not part of this NPDES permit renewal process. In fact, the City of Seattle's CSO system was also investigated in March 2008, and the City has yet to apply for a permit renewal. Seattle's CSO permit expires in March 2010. The EPA field investigations were initiated as a result of a national prioritization on controlling CSOs. The field investigations focused on the nine minimum controls. The final results have not been released but Ecology believes that any possible EPA enforcement action, as a result of the field investigation, would be addressed by a mechanism outside of this permit. For these reasons, Ecology did not include a discussion in the fact sheet.

5. **Clarity about the design capacity of West Point and level of treatment.** The text in the draft Fact Sheet should better explain the treatment level that is available at each level of flow and how flow blending occurs. It should be written in plain English.

   Ecology's response: Please refer to page 18-19 of the draft permit regarding treatment levels and wet weather operations.

6. **Lack of adequate water quality data (organic chemicals, etc) about CSO Treatment plant effluents.** The one sampling event for Alki facility occurred during an enormous storm and so provides data that may be quite anomalous from the typical large storms that occur in the region.

   Ecology's response: Many of the satellite CSO Treatment facilities (Alki, Carkeek, and MLK/Henderson) often discharge only during large storm events. Therefore, data during these events is representative.

7. **Sediment data around West Point outfall**. The Fact Sheet (page 41) reports that staff were "Unable to determine compliance with Sediment Management Standards for the benthic surveys due to lack of reference station." What did follow-up did Ecology require for this problem?

   Ecology's response: In each of the sampling events (Years 1998, 2000, and 2006), King County was required to test for three types of toxicity bioassays, which they completed and met the requirements of the Sampling and Analysis Plans and permit. King County was not required to conduct benthic surveys for permit compliance purposes; they were done voluntarily for informational purposes only. Ecology is not requiring follow-up actions regarding this issue.

8. **Sediment data around West Point outfall**. Page 42. "Bioassays have indicated toxic effects at a few stations near the end of the outfall in all years. The following four stations have failed one or more bioassays in one of the three sampling years: WP280W, WP230P, WP215N, WP430N. Some of these stations coincide with elevated concentrations of PAH compounds. Station WP280W failed all three bioassay tests in 2006, but there was no indication of elevated concentrations in any of the chemicals tested. Station WP230P has failed bioassay tests for all three sampling events. In 1998 and 2000, benthic surveys showed benthic abundance and diversity were reduced at two stations (WP230P, WP430N) compared to the other sites near the outfall. These two stations also had bioassay toxicity. In 2006, no differences were evident between the stations. We were not able to compare benthic data to the SQS criteria due to the lack of an appropriate reference station." Again, what is Ecology requiring to address this problem?

   Ecology's response: Refer to Ecology's response to Permit Comment #9 above.

9. **Lack of data about sediment quality around CSO Treatment outfalls**. P 42. "Sediment monitoring has occurred at some other CSO outfalls, however, there is no comprehensive summary so that Ecology can evaluate data gaps." Ecology should require decisive action for the sediment contamination problem at CSO outfalls. In addition to better monitoring (and reporting of the monitoring data), Ecology should require source control actions to reduce the continuing contamination of these sites.

   Ecology's response: Permit Special Condition S18.J requires the County to provide additional information and data regarding sediments at CSO locations. Ecology requires source control actions via our pre-treatment program. Please refer to Permit Special Condition S6.

10. **Sites that are not being cleaned up.** Page 43. The Fact Sheet states, "In 1999 King County developed a Sediment Management Plan that identified seven contaminated sediment sites near CSO discharges. Four of those sites have at least some cleanup actions planned or completed…. The NPDES permit for the CSO discharges has a role in assuring discharges are in compliance with the Sediment Management Standards."
    a. Please identify which sites are not being addressed.
    b. People For Puget Sound believes that if receiving waters are impaired due to contaminated sediments above standards then the discharges have to be addressed and NPDES permits including areas that are not listed as Superfund sites.

    Ecology's response: The three sites listed in the 1998 Sediment Management Plan are Brandon Street CSO, King Street CSO, and Chelan Ave CSO (within Harbor Island Superfund site boundary).

    We will evaluate existing data about sediment quality and discharge quality at all CSO sites, not just discharges into the Superfund sites. If additional data is needed to determine sediment impacts, sediment monitoring will be required.

11. **Removal percentage**. Page 49. The Fact Sheet states, "A dilute influent can make the 85% removal criteria for CBOD5 and TSS difficult to achieve. Ecology has determined that the percent removal requirements for CBOD5 and TSS will remain at 80% during the months of November through April (wet weather months) when the influent is likely to have lower than normal concentrations of both CBOD5 and TSS. The federal CSO statute requires as one of the Nine Minimum Controls (NMC, No. 4) that the West Point Treatment Plant maximizes flows to the plant during the wet season in order to minimize CSO discharges. In the decision to reduce the removal requirement to 80% during the wet season, Ecology has recognized that removal efficiencies may be compromised in order to accomplish the more important goal of maximizing flow to the treatment plant and minimizing CSO discharges."

    "Ecology recognizes that increased flows to the treatment plant over time may impact the achievable removal efficiency during wet weather conditions. Ecology will evaluate the percent removal requirement during the wet season during each permit cycle and establish the removal requirement based on recent plant performance data."

    An alternative strategy, not mentioned in the Fact Sheet is that CSO inputs to West Point be reduced by on site infiltration and reuse rather than just waiting to see if more CSO inputs have more negative impacts. In both instances, Ecology demonstrates that it uses a reactive rather than a directive policy with regard to permit writing.

Ecology's response: Ecology encourages the use of green infrastructure in combination with conventional CSO control strategies as well as satellite reuse opportunities. It is up to the public entity to decide which control projects they will plan, design and construct and the associated rate impacts of these projects on their ratepayers.

12. **Remove subjective language.** Page 54. "This permit authorizes a small acute mixing zone..." This sentence should be revised; the size of the acute mixing zone is in fact not small. This sentence was not included in the existing Fact Sheet and is subjective.

    Ecology's response: The word "small" has been deleted.

13. **Modeling of ambient conditions for all outfalls**. It is unclear if new conditions are being used (relative to the last permit). If so, please explain what quantitative difference (positive or negative) the new ambient stations are relative to the use of the old station.

    Ecology's response: Please refer to Ecology's response to General Comment #2.

14. **Bioaccumulative impact of the discharge**. Page 57. Although the Fact Sheet addresses toxicity testing of the effluent ("Ecology evaluates the cumulative toxicity of an effluent by testing the discharge with whole effluent toxicity (WET) testing."), it does not address the bioaccumulation or biomagnification impact of the effluent on the Puget Sound food web. No tissue testing (either shellfish or resident pelagic fish) is proposed nor is it discussed. Toxicity testing (WET) is useful but does not give us complete information about the impact. People For Puget requests that bioaccumulation or biomagnification (fish tissue) sampling or testing in the vicinity of the outfalls (West Point and CSOs) be included as a requirement in this permit.

    Ecology's response: Please refer to Ecology's response to Permit Comment #10.

15. **Clarification of conclusion about toxic chemicals**. On page 57, the Fact Sheet text, "Based on this review, Ecology concluded that the discharge does not have a reasonable potential to cause the loss of sensitive or important habitat, substantially interfere with existing or characteristics uses, result in damage to the ecosystem, or adversely affect public health if the permit limits are met." should be changed to (new language in caps) "Based on this review AND ON CURRENT INFORMATION, Ecology concluded that the discharge does not have a reasonable potential to cause the loss of sensitive or important habitat, substantially interfere with existing or characteristics uses, result in damage to the ecosystem, or adversely affect public health if the permit limits are met." We believe that the discharge does have the reasonable potential for harm and that Ecology does not have complete information on hand in order to make this assessment.

    Ecology's response: Our analyses are based on current information. No additional language or revision to the fact sheet is necessary.

16. **Minimize the size of mixing zone**. Page 58. The Fact Sheet text avoids the issue of reducing the authorized size of the mixing zone for each toxic chemical individually. For each analysis, a quantitative numbers (i.e., mixing zone radius and other quantitative numbers) are plugged into Ecology's equations in order to calculate reasonable potential. A table should be created for each toxic chemical that is detected in the effluent above water quality standards that shows the current

needed width of mixing zone. In this way, the public can be assured in future permit renewals that Antidegradation is applied. Furthermore, this paragraph does not address the issue of reducing the authorized size of the mixing zone:

> "Ecology minimizes the size of mixing zones by requiring dischargers to install diffusers when they are appropriate to the discharge and the specific receiving waterbody. When a diffuser is installed, the discharge is more completely mixed with the receiving water in a shorter time. Ecology also minimizes the size of the mixing zone (in the form of the dilution factor) using design criteria with a low probability of occurrence. For example, Ecology uses the expected 95th percentile pollutant concentration, the 90th percentile background concentration, the centerline dilution factor, and the lowest flow occurring once in every ten years to perform the reasonable potential analysis. Because of the above reasons, Ecology has effectively minimized the size of the mixing zone authorized in the proposed permit."

Ecology's response: Please refer to Ecology's response to General Comment #2b.

17. **Outfall descriptions.** On pages 62-63, as noted in additional comments above, the text descriptions of the outfalls and diffusers are incomplete and inconsistent in this section of the Fact Sheet as well.

    Ecology's response: Comment noted.

18. **Mixing Zone descriptions and diagrams**. On page 64, it would be clearer to the reader if the text for each mixing zone read (recommended inserted text is capitalized): "The horizontal distance of the chronic mixing zone is 430 feet FROM EACH PORT" etc. Members of the public will not easily be able to understand the configuration of these mixing zones without diagrams. We request that Ecology provide a diagram that depicts the mixing zone (acute and chronic) for each outfall discussed on page 64.

    Ecology's response: Diagrams for West Point WWTP's outfall and the CSO Treatment Plants' outfalls have been added.

19. **Dilution factors**. As noted above, the dilution factors have been significantly increased for chronic conditions for West Point's effluent. This information should be described in the Fact Sheet in much more detail, including assumptions.

    Ecology's response: Please refer to Ecology's response to General Comment #3.

20. **Temperature.** On Page 67, the text states:

> "West Point WWTP reported a maximum effluent temperature of 23.3°C on their NPDES application. Using the dilution ratio of 181:1 (receiving water : effluent) and maximum daily temperature of 14.7°C for the receiving water and 23.3°C for the effluent, the predicted maximum daily temperature inside the dilution zone is ((181x14.7)+(1x23.3))/(181+1) = 14.75°C. Thus, under the worst case scenario, the effluent discharge from this facility results in warming of the ambient temperature by 0.05°C, which is less than the allowable warming temperature of 0.3°C."

We are concerned that maximum daily ambient temperature is used for this calculation. The effluent holds a relatively similar temperature through the year whereas the ambient temperature may have a more significant range of values and therefore this calculation should include a more detailed analysis in which temperatures should be compared over a longer timeframe (not just a snapshot) during the critical season. In this case – how is the critical condition defined relative to fish migration blockage?

Ecology's response: Ecology disagrees with the statement that effluent temperature does not vary throughout the year. The West Point WWTP serves a combined sewer area which can have cold, peak wet weather flows during the winter months. The above calculation takes into account an unlikely, conservative, worst-case scenario approach. It combines the maximum daily effluent temperature (summer) and maximum daily ambient temperature recorded. The above calculation includes 5 years worth of data and therefore, is not a "snapshot" in time. The diffuser is 600 feet long. Given the width of Puget Sound, it is unlikely that this outfall will block fish passage.

21. **Toxic chemicals**. The draft Fact Sheet states that: "The following toxic pollutants are present in West Point WWTP's discharge: ammonia, arsenic, cadmium, chlorine, chromium, copper, lead, mercury, nickel, silver, and zinc." In Appendix C, Appendix F and in the current Fact Sheet, a number of other chemicals are listed and should be included. Please add these chemicals to the list and conduct a reasonable potential analysis including the needed radii of the mixing zone for each: Total Phenolic Compounds, Choloroform, Methylene chloride, Tetrachloro-Ethylene, Bis (2-ethylhexyl) phthalate, 1,4-Dichloro benzene, and Diethyl phthalate.

    Also why are there no data for Methyl Bromide and Methyl Chloride and what is being done about this gap?

    Ecology's response: All of the detected chemicals in the effluent for which there are water quality criteria were evaluated in the reasonable potential analysis. None of the chemicals had a reasonable potential to exceed the water quality criteria. In regard to methyl bromide and methyl chloride, there are no data gaps. These compounds were analyzed, but King County uses a different naming convention – bromomethane and chloromethane. For these compounds, all analyses indicated that they were below the detection limits.

22. **Description of ambient samples**. The Fact Sheet (page 72) inadequately describes ambient condition samples for the Carkeek CSO Treatment Plant. The values are not included in the text, nor is it clear why 90% concentrations were used.

    Ecology's response: It is not the intent of this fact sheet section to describe ambient conditions. Ambient data and conditions were previously described on page 56 of the draft fact sheet. The draft fact sheet statement, "Ecology used the 90% concentrations for these pollutants in the reasonable potential analysis" is incorrect. Ecology used the maximum detected concentration of pollutants in the reasonable potential analyses. The fact sheet has been revised to correct this statement.

23. **Lack of limit for copper**. Ecology is giving King County preferential treatment by not imposing a copper limit for the Elliott West discharge. A precautionary approach would be to require a

limit for copper because the existing data supports that it has a reasonable potential to violate water quality standards. It is inappropriate to throw out the high value (which is called an anomaly in the Fact Sheet) which represents a lesser volume storm and defer to the data from a high volume (and therefore more diluted) major storm of Dec 3-4, 2007. Instead, Ecology is allowing King County to do more sampling for two years (and at that, only a four times per year so that King County can continue to argue that there are not enough samples or they are anomalous if all collected during one storm) before possibly imposing a limit. At the very least, Ecology should require that King County collect samples from 4 different storms per year and make an attempt to collect first flush samples.

Ecology's response: Ecology believes that the very limited data set (i.e. 1 flow-weighted composite sample for storm on 11/13/07 and 4 flow-weighted samples and 1 grab sample for storm on 12/2/07-12/04/07) provides insufficient data to adequately characterize the discharge and justify imposing a limit. In the proposed permit, Ecology has increased copper sampling to 4 times per year compared to the current permit of once per year.

24. **Toxicity Testing**. The text (page 75) should describe the number and frequency of WET tests rather than to just state that one test failed. Please provide this information. In addition, this sentence (page 74) contains unexplained terms and is unnecessary and should be deleted: "Accredited laboratory staff knows about WET testing and how to calculate an NOEC, LC50, EC50, IC25, etc."

    Ecology's response: Additional information has been provided in an Appendix to the Fact Sheet. The above-quoted fact sheet language is standard template language.

25. **Human Health.** Please provide a list of chemicals and analysis (page 75) described in the Fact Sheet: "the evaluation showed that (1) the discharge has no reasonable potential to cause a violation of water quality standards."

    Ecology's response: Please refer to the human health criteria tables listed in Appendix F.

26. **Sediment Quality**. As noted on page 76, "Ecology determined that the West Point WWTP discharge has potential to cause a violation of the sediment quality standards." We agree with this, and yet the Fact Sheet in this section provides no detail about the many rounds of sediment sampling that have shown exceedences of standards or bioassay failures. Like descriptions of toxic chemicals in the water column, a similar description should be included here. Again, as noted above, we disagree with the decision to simply require more sampling rather than requiring King County take action to reduce toxic chemicals that are impairing sediments and benthic organisms.

    Ecology's response: Please refer to Ecology's responses #6 (permit) and #3M (fact sheet) above. We are requiring additional sampling to investigate the areal extent and cause of the sediment toxicity. Once the cause of the toxicity is identified, and we can confirm that it is from the current discharge, we can explore potential remedies.

27. **Sediment toxicity testing**. The requirement described on page 76, "Continue sediment and effluent testing to investigate the source and extent of toxicity at the West Point Treatment Plant outfall" does not actually lead us to answers. Instead of simply requiring more sediment sampling in a generic manner, Ecology should specify how the study should be conducted so that

it will lead to answers. The number and location of samples should be specified around the outfall and up system sampling should be conducted in order to determine the toxicity problems. All this permit requires is more of the same. In addition, Ecology should require King County to convene a stakeholder group, starting prior to June 2009, which should meet at least quarterly for the life of the study, to participate in designing and overseeing implementation and reporting for an appropriate sediment and system toxicity study that will lead to answers. This stakeholder group should include scientists from environmental groups, academic institutions and consultant groups in order to ensure that a high quality study is conducted.

Ecology's response: Please refer to Ecology's response to permit Comment #9. Prior to the County's submission of the Sampling and Analysis Plan, Ecology will provided specific information to the County on what should be included in the SAP. Ecology will review the draft SAP document and provided additional comments to the County, if needed. In the final SAP, the number and locations of samples will be specified. We are requiring additional types of monitoring to determine the source and areal extent of the sediment toxicity.

Sediment monitoring will be ongoing at this site for the life of the permit. We will consider any comments received about sampling before the SAP is developed and incorporate them as appropriate into our review. We do not feel that a stakeholder review group is appropriate for reviewing Sampling and Analysis Plans.

28. **Appendix D**. Please provide the average annual flow for West Point.

    Ecology's response: West Point WWTP's average annual flows for years 2004, 2005, 2006, and 2007 were 99.7MGD, 96.8 MGD, 117.4 MGD, and 98.1 MGD, respectively.

29. **Table F-9**. How is it possible after all of these years of operation to not have effluent plume values to input into this calculation (Dilution Assessment for pH)?

    Ecology's response: Salinity and total alkalinity in the effluent is expected to be neglible and therefore, have minimal impact on the pH assessment. These values are not available as they were not required monitoring parameters.

Thank you for the opportunity to comment. Please contact me with questions at (206) 382-7007 X215.

Sincerely,

Heather Trim
Urban Bays and Toxics Program Manager

cc:
Senator Patty Murray

Senator Maria Cantwell
Congressman Jay Inslee
Congressman Jim McDermott
Tom Eaton, US EPA (Region 10)
Elin Miller, US EPA (Region 10)
Chairman Leonard Forsman, Suquamish Tribe
Chairwoman Charlotte Williams, Muckleshoot Tribe
Chairwoman Cecile Hansen, Duwamish Tribe
Senator Jeanne Kohl-Welles
Representative Reuven Carlyle
Representative Mary Lou Dickerson
Senator Joe McDermott
Representative Eileen Cody
Representative Sharon Nelson
Senator Margarita Prentice
Representative Zachary Hudgins
Representative Bob Hasegawa
Commissioner Peter Goldmark
Executive Ron Sims, King County
Council Member Larry Phillips, King County
Council Member Dow Constantine, King County
David Dicks, Puget Sound Partnership
Richard Conlin, Seattle City Council
Ray Hoffman, Seattle Public Utilities
Phyllis Meyer, NOAA Fisheries
Doug Osterman, WRIA 9
Jean White, WRIA 8

Comments from EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 1
200 Sixth Avenue. Suite 900
Seattle, Washington 98101-3140

Reply to

Attn Of: OWW-130

FEB 12 2009
Mark Henley
Water Quality Permits
Department of Ecology Northwest Regional Office
3190 -160th Avenue SE Bellevue, WA 98008-5452

Re: King County Wastewater Treatment Division -West Point Wastewater Treatment Plant

NPDES Permit No.: WA-002918-1

Dear Mr. Henley:

Thank you for the opportunity to review the draft National Pollutant Discharge Elimination System (NPDES) permit for the King County Wastewater Treatment Division -West Point Wastewater Treatment Plant, NPDES Permit No. WA-002918-1 (Permit). The U.S. Environmental Protection Agency Region 10 (EPA) has the following comments for your consideration.

In addition, EPA has provided two attachments to this letter. The attachments provide guidance on EPA's expectations for feasibility analyses. Attachment A provides guidance on performing a full no feasible alternatives analysis, as well as guidance to the permitting authority. Attachment B provides specific guidance to King County regarding items that need to be included with a no feasible alternatives analysis.

Comments:

1. **Permit Condition S.l**. The Total Suspended Solids (TSS) percent removal for the Carkeek, Alki, Elliott West, and HendersonIMLK CSO Treatment Plants (the "CSO treatment plants") is 50%, as an annual average. In calculating the 50% removal requirement, King County is allowed a "credit" by using the TSS percent removal that is discharged in the final effluent from the West Point Treatment Plant. Washington State Department of Ecology's (Ecology's) rationale behind this method is that, when the CSO treatment plants are not discharging through their own outfalls, all of the flow from the CSO treatment plants' storage tanks will flow back to the West Point Treatment Plant. This approach allows each individual CSO treatment plant to achieve significantly less than 50% removal when considering only those discharges from the CSO treatment plant outfall while still purportedly meeting the annual percent removal requirement for the CSO treatment plant outfall.

EPA recognizes that Ecology's Criteria for Sewage Works Design states that this is an acceptable practice for CSO wet weather treatment plants. However, an overflow from a CSO treatment plant should not be considered controlled when discharges from that plant do not meet the 50% removal requirement.

Ecology's own regulation defines "primary treatment" as "any process that removes at least 50% of the total suspended solids from the waste stream, and discharges less than

0.3 mllUhr of settleable solids." The "primary treatment" definition is found at WAC I73-245-020(16). According to EPA's interpretation of Ecology's regulation, if the CSO treatment plant cannot achieve the 50% removal at the end of pipe *(i.e.*, the "waste stream") then the CSO treatment plant needs to meet the standard of only one overflow per year per outfall. In that case, every discharge after the one per year that does not meet 50% removal would not be an authorized discharge. EPA's understanding is that the 50% removal requirement applies specifically to the CSO treatment plant outfall and cannot be achieved by using effluent data from other outfalls. Please provide an explanation of how this approach meets Washington State regulations and the Clean Water Act.

Ecology's Response to Comment #1

The Clean Water Act states that CSO treatment must be equivalent to primary treatment, but does not specifically define treatment type. Ecology's regulation defines primary treatment as "any process that removes at least 50% of the total suspended solids from the waste stream, and discharges less than 0.3 ml/L/hr of settleable solids". Ecology's guidance document entitled, "Criteria for Sewage Works Design" allows for a mass balance approach to meet the TSS requirement. Ecology has interpreted that "any process" includes storage/settling facility at the CSO satellite location as well as primary clarification at the POTW. Ecology has interpreted that 'waste stream' is the overall waste stream and not just the incoming sewage to the CSO treatment plant. By this interpretation, the mass balanced approach meets the requirements of Washington State rule.

2. **Permit Condition S.17**. This permit condition authorizes a CSO-related bypass from the West Point Wastewater Treatment Plant. EPA's Combined Sewer Overflow Guidance for Permit Writers (EPA-832-B-95-08) states that a "CSO-related bypass" at the wastewater treatment plant can only occur if the facility has completed a no feasible alternatives analysis. The no feasible alternative requirement can be met if the record demonstrates that the secondary treatment system is properly operated and maintained, that the system has been designed to meet secondary limits for flows greater than the peak dry weather flow plus an appropriate wet weather flow, and that it is either technically or financially infeasible to provide secondary treatment for greater amounts of wet weather flow. *See* CSO Guidance for Permit Writers at p. 4-35. The Fact Sheet accompanying the Permit does not provide information concerning a feasibility analysis. It is not apparent that such an analysis has been done nor is there an explanation that indicates that there is proper justification for allowing the CSO-related bypass. The record should discuss the justification for allowing the CSO-related bypass.

If you have any questions regarding these comments, please contact Lisa Olson of my staff at (206) 553-0176 or at olson.lisa@epa.gov.

Sincerely,

Michael J. Lidgard

Manager
NPDES Permits Unit
Enclosure
cc: Karen Burgess, Washington Department of Ecology-Bellevue Office

Attachment A

No Feasible Alternatives Analysis Process

1) POTW treatment plant operators seeking approval of peak wet weather diversions at a treatment plant as an anticipated bypass should submit a comprehensive analysis (utility analysis) to the NPDES authority that:

a) documents current treatment plant design capacity for all treatment units, the maximum flow that can be processed through those units, and the feasibility of increasing such treatment capacity and related costs;

b) estimates the frequency, duration, and volume of current wet weather diversions, and evaluates alternatives to reduce the frequency, duration, and volume of such occurrences and related costs;

c) estimates the potential for future peak wet weather diversions based upon information such as predicted weather patterns, population growth, and projected treatment plant and collection system changes (e.g., upgrades, extensions, deterioration) and evaluates options for reducing diversions based on these variables;

d) assesses existing storage within the collection system or on-site and options for enhanced utilization or expansion (taking into account physical and technological considerations) of storage to reduce the frequency, duration, and volume of peak wet weather diversions, and the related costs;

e) assesses other ways to reduce peak wet weather flow volumes, such as limiting collection system extensions or slug loadings from indirect dischargers;

f) evaluates technologies (such as supplemental biological treatment, physical chemical treatment, ballasted flocculation, deep bed filtration, or membrane technology) that are or could be used to provide additional treatment to peak wet weather flows or peak wet weather diversions at the POTW treatment plant and the costs of implementing those technologies;

g) evaluates the extent to which the permittee is maximizing its ability to reduce III throughout the entire collection system (Le., not only the portions operated by the utility, but also portions operated by any municipal satellite community), including the use of existing legal authorities, potential improvements in the timing or quality of such efforts, and options for obtaining or expanding legal authorities to reduce III from satellite collection systems;

h) evaluates peak flow reductions obtainable through implementation of existing Capacity, Management, Operations, and Maintenance (C-MOM) programs and potential improvements in the timing or enhancement of those programs and the related costs; or, if no such program exists, reductions obtainable through the development and implementation of a C-MOM program and the related costs;

i) assesses the community's ability to fund the peak wet weather flow improvements discussed in the utility analysis, taking into consideration: current sewer rates, planned rate increases, and the costs, schedules, anticipated financial impacts to the community of other planned water and wastewater expenditures, and other relevant factors impacting the utility's rate base, using as a guide EPA's CSO Guidance for Financial Capability Assessment and Schedule Development, EPA 832-B-97004;

j) proposes a protocol for monitoring the recombined flow at least once daily during diversions for all parameters for which the POTW treatment plant has daily effluent limitations or other requirements (e.g.,

monitoring only requirements) and ensures appropriate representative monitoring for other monitoring requirements of the permit, the total volume diverted, and the duration of the peak wet weather diversion event; and

k) projects the POTW treatment plant effluent improvements and other improvements in collection system and treatment plant performance that could be expected should the technologies, practices, and/or other measures discussed in the utility analysis be implemented.

2) For any POTW treatment plant operator seeking approval in an NPDES permit for an anticipated bypass under this policy, the NPDES authority should:

a) make the utility analysis publicly available with other draft permit information for public review and comment;

b) review and evaluate the utility analysis and require measures to be undertaken to provide the highest possible treatment to the greatest possible peak wet weather flow, taking into account the full range of economic, environmental, public health, and engineering considerations;

c) review and approve or deny the peak wet weather diversions based on the determination of whether there are feasible alternatives to those diversions using the analysis set forth in this policy;

d) include a permit provision recognizing any approved peak wet weather diversions as anticipated bypasses, and specify the conditions for allowing such diversions;

e) include a permit provision requiring any POTW treatment plant operator that has an approved anticipated bypass to provide notice of the peak wet weather diversion event consistent with 40 CPR 122.41(m)(3);

f) include a permit provision requiring the operator of any POTW treatment plant that has an approved anticipated bypass to monitor the recombined flow at least once daily during diversions for all parameters for which the POTW treatment plant has daily effluent limitations or other requirements (e.g., monitoring only requirements), the total volume diverted, and the duration of the peak wet weather diversion event. For parameters for which the permit establishes non-daily effluent limitations, include in the permit monitoring requirements sufficient to yield data representative of the final blended discharge, in order to ensure compliance with applicable effluent limitations. See 40 CPR 122.48(b);

g) describe in the permit Fact Sheet prepared under 40 CPR 124.8(b) how the peak wet weather event was calculated, the reason for allowing peak wet weather diversions, and any requirements for such peak wet weather diversions;

h) ensure that permit load limitations account for the anticipated flow into secondary treatment units during both wet and dry weather conditions;

i) include permit provisions for public notification (e.g., via utility website) of the peak wet weather diversion event within 24 hours of the inception of each event; follow up public notification of the duration and volume of the event within 48 hours of its cessation; and for public review of the POTW treatment plant operator's peak wet weather flow diversion practices upon request;

j) include permit provisions requiring the control authority with an approved pretreatment program to review, and revise if necessary, local pretreatment limits for indirect dischargers to take into account peak wet weather diversion events (e.g.• significant industrial users with batch -discharging);

k) if the discharge will be to sensitive receiving waters (Le., waters used for recreation; drinking water; shellfish beds; waters formally designated by state or federal authorities as requiring special consideration or protection; waters with threatened or endangered species), ensure that the impact of any peak wet weather diversion events on these waters is minimized and additional caution exercised as permit limitations are set; and

L) rigorously review each and every POTW permit renewal request that seeks continued approval of peak wet weather diversions to ensure that a comprehensive utility analysis consistent with section I above is submitted, or in the case of phased implementation, has been submitted, and evaluated and that peak wet weather diversions are approved only when no feasible alternatives to them are identified through the process set forth in this policy.

Attachment B

Specific No Feasible Alternatives to King County. In particular EPA would like to see Ecology encourage King County to focus on the following:

Maximizing Secondary Treatment to eliminate Bypass. The County must evaluate the expansion of its current secondary capacity. This evaluation should look at a reasonable range of expansion options up to total elimination of the bypass. From USEPA's perspective, it is important that these measures include some/all of the following:

Days and hours that the bypass is active per typical year
Volume of bypasses per typical year
Volume of largest bypass in a typical year
Duration of largest bypass in a typical year

2. Maximizing Storage. The addition of greater storage capacity should also be evaluated. As greater storage capacity may not reduce bypassing issues, due to the need to dewater greater storage volumes within reasonable time limits, it is possible that the evaluation of this alternative may not require the detailed evaluation of a range of sizes of increased storage, but rather a technical examination and discussion of the technical feasibility of increases in upstream or onsite storage volumes.

3. Performing a Cost/Benefit Analysis. A comparison of the technical and financial feasibility and relative benefits of the options specified above. This comparison should include the expected cost/benefits of each technically feasible alternative. For any alternative that the County believes is infeasible due to financial burden, an analysis of the projected incremental impact of user fees should be provided.

Ecology's Response to Comment #2

Per the CSO Control Policy, it is stated, "EPA further believes that the feasible alternatives requirement of the regulation can be met if the record shows that the secondary treatment system is properly operated and maintained, that the system has been designed to meet secondary limits for flows greater than the peak dry

weather flow, plus an appropriate quantity of wet weather flow, and that it is either technically or financially infeasible to provide secondary treatment at the existing facilities for greater amounts of wet weather flow."

As described in the draft fact sheet, recent Class I and Class II inspections by Ecology found the West Point WWTP to be well operated and maintained. The design criteria for West Point includes an average dry weather flow and an average wet weather flow (during non-storms) of 110 MGD and 133 MGD, respectively. The West Point WWTP has a design criteria for maximum month flow of 215 MGD. The West Point WWTP has been designed to meet secondary limits for flows greater than the peak dry weather flow plus an appropriate wet weather flow. West Point is able to treat flows up to 300 MGD through the secondary process. With the CSO-related bypass process, the West Point effluent meets, and is required to meet, secondary effluent limits at all times.

The planning phase to upgrade West Point WWTP from primary to secondary treatment occurred in the late 1980's and early 1990's, prior to issuance of EPA's CSO Control Policy and the associated CSO by-pass provision. During the planning and design phase, it was determined that the secondary system could not accommodate the peak wet weather flow as West Point WWTP serves a combined sewer area and there was fear that these peak flows would washout the biomass in the secondary clarifiers. The CSO Control Policy states, "For purposes of applying this regulation to CSO permittees, 'severe property damage' could include situations where flows above a certain level wash out the POTW's secondary treatment system". Therefore, the CSO policy allows for a bypass to prevent loss of biomass in the secondary system. Ecology believes that the CSO-related bypass is justified and in accordance with the CSO Control policy.

During the draft permit stage of this permit, the County submitted to Ecology for review a feasibility analysis per the CSO Control Policy requirements and Attachment B of EPA's comment letter. Ecology reviewed this document and Ecology believes there is adequate justification to authorize the CSO-related bypass for this permit cycle. Therefore, Ecology has authorized the bypass of the secondary process during the conditions specified in Special Condition S17 Wet Weather Operation.

Comments from King County

December 15, 2008

Mr. Mark Henley
Permit Manager
Department of Ecology – NWRO
3190 160th Avenue SE
Bellevue, WA 98008-5452

RE: Comments on West Point Draft NPDES Permit #WA-002918-1

Dear Mr. Henley,

Thank you for the opportunity to provide comment on the proposed NPDES Permit for the West Point Treatment Plant. King County Wastewater Treatment Division (WTD) is proud of our service to the public and the environment in creating resources from wastewater as we protect and enhance our precious natural resources. We look forward with working with the Department of Ecology and all other stakeholders in our region to prioritize future efforts to improve the health of the Puget Sound and other important initiatives.

We offer the following comments on the Draft NPDES permit for the West Point facility. Our comments are listed in the order they appear in the permit.

1. Title page of Permit and Page 9 of Fact Sheet – Since the West Point Treatment Plant provides CSO treatment as well as secondary treatment, the facility should be referred to as the "West Point Wastewater Treatment Plant and CSO Treatment Facility". During the upgrade of West Point to its present size and operation, a parallel Fort Lawton tunnel and other improvements were built specifically to convey combined sewage and stormwater to the plant for treatment. The plant was then designed with a hydraulic capacity of 440 mgd to provide primary treatment to those newly captured flows. As you know, the facility was expressly designed to provide secondary treatment to 2.25 times wet weather sewage flow (300 mgd), and then to provide primary treatment to up to 140 mgd additional CSO treatment. It is appropriate and important to acknowledge this function of treating up to 140 mgd of CSO flow at the West Point Treatment Plant in the title pages and descriptions of the facility.

   Ecology's Response to Comment #1:

   In the draft permit, Ecology provided a description that the West Point WWTP serves a combined sewer area and that the WWTP provides screening, grit removal, primary treatment, and disinfection for flows above 300 MGD to 440 MGD. Ecology has added, "serves combined sewer area" to the title page.

2. Page 5 – Summary of Submittals in the Permit – Some required submittals are listed as being required at a frequency of once per permit cycle. However, as per the permit requirements, they are only triggered if specifically needed. Therefore, we request the following submittals be listed with a frequency of 'if necessary': S12 Receiving Water Study QAPP; S13 Sediment Acute Toxicity Study; Chronic toxicity study; and S18.H Receiving water QAPP – CSOs.

   Ecology's Response to Comment #2:

   Comment noted. For the following submittals, the words "If required" have been added: S12 Receiving Water Characterization and S18I. Receiving Water Characterization. The Sediment Acute and Chronic Toxicity Studies are actually part of S13A – Sediment Sampling and Analysis Plan. The Sediment Acute and Chronic Toxicity Studies submittals have been deleted from the Summary of Permit Report Submittals, as they are repetitive. The sediment acute and chronic benthic toxicity studies are still required under S13A. An additional permit report submittal has been added – "S13 C Source of Toxicity Study." The title of S13.C has been renamed to "Source of Toxicity Study" in the permit for clarification. In the frequency column, the words "If required, 1/permit cycle" have been added.

3. Pages 16,18,21,23,26 – S2.A 2-6, CSO Facilities monitoring schedules and the individual CSO reporting of Storm Duration and Precipitation - We request that footnote "j" in the Alki, Carkeek, Henderson/MLK and Elliott West monitoring schedules and footnote "c" in CSO outfall monitoring schedule be modified to acknowledge that the ***storm inter-event intervals*** differ from the CSO discharge inter-event intervals. While the minimum inter-event interval between CSO discharges will always be 24 hours, the intervals between rain storms will vary greatly and thus will be dependent on rain patterns. Storm Inter-Event Intervals are best determined based on a case-by-case analysis of the rain gauge data after each month.

   Ecology's Response to Comment #3:

   A new footnote has been added to clarify the meaning of storm duration.

4. Pages 16,18,21,23 – S2.A 2-6 – CSO Facilities monitoring schedules – Please revise the BOD sample type to include a "grab".

   Ecology's Response to Comment #4:

   Ecology believes that flow proportional composite sampling is more representative than grab sampling for CSO treatment facilities. No change has been made for to the sample type. If during a discharge event only a grab sample can be collected, it should be noted in a narrative explanation along with the monthly DMR.

5. Page 36 – S5.G.4 – Operations and Maintenance Manual – The phrase "or other plant-related manuals" should also appear in the sentence following #4, prior to the colon.

   Ecology's Response to Comment #5:

   Requested language added to the permit.

6. Page 44 – S12 – Since the intent of this section is to provide representative ambient monitoring data for the reasonable potential analysis for permit re-evaluation/renewal, we request that the first sentence be revised to clarify that the parameters required for sampling are limited to those listed in 'G' and 'H' of this section.

Ecology's Response to Comment #6:

The parameters listed in S12.G and S12.H are known to be in the effluent and therefore, ambient data is required. If the priority pollutant analyses reveal parameter(s) in addition to the ones previously found, then the County will be required to provide ambient information for these additional parameters.

7. Page 44 – S12.A – If King County is to conduct additional sampling to provide ambient metals data, we would need a reasonable amount of time to prepare the required QAPP due to the difficulty in determining the appropriate method to achieve low detection limits of metals in the marine environment. We request that the due date of December 31, 2009 be revised to June 30, 2010.

Ecology's Response to Comment #7:

The requested due date of June 30, 2010, is acceptable and the change has been reflected in the permit.

8. Page 45 – S13.C – We request that the "30 day" requirement here be revised to "60 days" since it will require at least that amount of time to begin such an additional investigation.

Ecology's Response to Comment #8:

The requested change from a 30-day requirement to 60 days is not granted. Ecology is concerned that extending the test duration may result in contaminant degradation in the sample while being stored for a longer time period. Ecology believes that the timeframe between observing the toxicity and investing its source should be minimized.

9. Page 55 and 56 – Section S12.J.32-Sediment Quality Monitoring at CSOs – We request that current requirement for additional sediment collection "…must collect and analyze sediments in the **summer** of 2011 or 2012" be modified to allow collection and analysis of sediment at any time of the year. Sediment sampling results should not vary by season and therefore there does not appear to be a specific reason that the summer timeframe. Moreover, if we were unable to complete sampling in the summer of 2011, we might not be able to complete all the sampling and necessary sediment analysis QA/QC by the deadline required (January 1, 2013) if the sampling was only allowed in the summer of 2012.

Ecology's Response to Comment #9:

The requested revision is not granted. In some instances, Ecology has observed increased toxicity during the summertime. Summertime periods have low dissolved oxygen levels which have an effect on metals speciation.

10. Page 66-70 – Appendix A – This new section of the permit listing chemicals and analyses contains a number of errors in analytical protocol number, detection limit values and quantification level values. We request that these errors be corrected.

Ecology's Response to Comment #10:

Comment noted. Ecology has revised Appendix A to correct the errors.

If you have any questions regarding these comments please contact Betsy Cooper, NPDES Administrator at 206-263-3728.

Sincerely,

Pam Elardo, P.E., West Section Manager
Wastewater Treatment Division (WTD), Department of Natural Resources and Parks (DNRP)

cc: Tricia Miller, Permit Coordinator, Department of Ecology
Christie True, Director, WTD, DNRP
Betsy Cooper, NPDES Administration, WTD, DNRP

Second Set of Comments Received from King County

February 13, 2009

Mr. Mark Henley, Municipal Facility Manager
Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

RE: West Point NPDES – Comment Letter

Dear Mr. Henley:

Thank you for the opportunity to provide comment on the proposed NPDES Permit for the West Point Treatment Plant, No. WA-002918-1. In addition to the comment letter provided to Ecology on December 15, 2008 (attached), and testimony I provided at the public hearing on January 27, 2009, King County Wastewater Treatment Division (WTD) would like to provide additional comments and information.

First, we appreciated the opportunity to attend and participate in the public hearing. Just as members of the public expressed concern at the hearing, King County is also very concerned about the current and future health of Puget Sound. For the past 40 years, the mission of King County's Wastewater Treatment Division (formerly the Municipality of Metropolitan Seattle or METRO) has been to protect the health of our citizens and the environment by treating our region's wastewater.

History of West Point

Before the West Point Treatment Plant began operations, wastewater from homes and business flowed mostly untreated to Lake Washington, the Duwamish River, and Puget Sound. In fact, the West Point Plant is sited at the historic location of a pipe that once discharged untreated sewage directly to the Sound. Beaches would become sullied by sewage and were often closed to the public. Fishing and swimming activities were considered health hazards. To address these serious water quality and environmental problems, METRO was created as an agency by public vote in 1958. METRO was charged with exercising the powers conferred by state law chapter 35.58 RCW related to water pollution abatement. RCW 35.58.200 confers specific powers to prepare and implement comprehensive water pollution abatement plans, including provisions for water quality improvement, sewage treatment, and storm water drainage.

The West Point Plant was the area's first regional treatment plant, built to meet primary treatment standards in 1966. Interceptor sewer lines were installed to capture and convey flows to West Point that were previously directed to smaller treatment plants or straight into our waterways. The plant was upgraded in 1995 from primary treatment to secondary treatment.

Today, the King County wastewater area includes an area of 420 square miles and over 350 miles of conveyance lines. Our regional system serves 1.4 million residents and numerous commercial and industrial businesses. West Point treats about 100 million gallons of wastewater generated every day by residents and businesses in the service area, removing tons of pollutants and recycling resources (solids, water and methane gas) in the process. In addition, the West Point Plant is designed to treat combined sewage and stormwater flow, up to 440 million gallons per day (mgd). Treating wastewater influent with significant ranges in volume and variable quality poses engineering and operational challenges. Despite these challenges, West Point effectively treats 35 to 40 billion gallons of wastewater and stormwater annually, consistently maintaining high effluent quality.

Combined Sewer Overflows

During significant storm events**,** the combined storm and sewer system in the West Point service area may receive flows exceeding current conveyance and treatment capacities. When this occurs, diluted wastewater (typically 1 part wastewater to 10 parts stormwater) is discharged directly to surface waters through permitted outfalls to avoid damaging facilities, flooding neighborhoods, and putting public health at risk.

In 1979, King County began working to reduce combined sewer overflows (CSO), recognizing that reducing uncontrolled CSO events will reduce pollutants discharged to Puget Sound. King County's Combined Sewer Overflow Reduction program has resulted in a 60-70% reduction in uncontrolled CSOs since the early 1980s. Currently, the system captures and treats 100% of dry weather flows and 96% of all wastewater and stormwater generated during wet weather events in the combined sewer areas. Under our Regional Wastewater Services Plan, King County plans to build 20 more CSO control projects between now and 2030. New projects will start every one to three years, and when the CSO control program is completed, the system will continue to capture 100% of dry weather flows and also capture 99% of all wet weather flows. All of King County's CSO discharges will then meet the state standard of no more than one untreated overflow per year on average.

To guide the CSO Control Program, the current CSO Control Plan was adopted as part of the Regional Wastewater Service Plan (RWSP) in 1999 following extensive public input and a Council process. As part of past NPDES permit renewals, we have reviewed the CSO Control Plan and submitted plan reviews/update reports. We sought public input for each of the plan updates and met with many stakeholders during 2006 and 2007 to develop the 2008 Update. We will again be seeking public input for the next Control Plan Review/Update beginning later in 2009.

We will continue to implement RWSP policies and seek public input as we design and construct four CSO control projects over the next five years in the West Point Service area.

In addition to the four projects currently underway to reduce discharges to Puget Sound, CSO control projects along the Duwamish River will begin in 2012. In the Duwamish, our projects already completed have achieved a 57% reduction in discharge from an annual baseline of 784 mg CSO discharge established in 1981-1983. Over half of the $400 million budgeted to complete the CSO control program will be spent on CSO control projects in the Duwamish waterway.

West Point Operations

The West Point Treatment Plant uses a high-purity oxygen system that allows us to consistently meet and exceed secondary treatment standards while operating on a site with significant space constraints. West Point in 2008 was awarded the *Platinum Award* from the National Association of Clean Water Agencies for consistently meeting effluent quality requirements.

To help maintain these standards, King County has programs to improve influent quality before wastewater arrives at the treatment plant. King County's Industrial Waste Program helps improve the quality of the influent entering our system by regulating commercial and industrial dischargers. Our industrial waste program, one of the first of its kind in the country, uses regulation and enforcement to ensure stringent standards for discharge to the sanitary sewer. In addition, the program provides technical assistance to customers and works cooperatively to improve influent quality. For example, our dental waste disposal program has effectively kept about 375 pounds of mercury out of the environment since 2003. This program is viewed as a national model by other sewer utilities.

In addition, we address residential wastewater quality with public education to help people make smart choices about household products they purchase and what they put down the drain. Our outreach staff provides tours and attends community events, meetings, and festivals to help citizens understand WTD's system and how their actions affect wastewater quality.

Coordination with Other Protection Efforts

King County actively works with other regional partners and the community to address water quality concerns. Currently, the Puget Sound Partnership and Ecology are undertaking several studies looking at nutrient loadings from various sources and the effects on dissolved oxygen in parts of Puget Sound. King County is participating with other regional partners in these studies. At this time, there is insufficient information to determine whether additional control of nutrients in the West Point discharge would have any impact on dissolved oxygen problems in the Sound. If Ecology's studies indeed identify problems associated with the West Point discharge, we will make the investment to address those issues.

The Duwamish River Cleanup is another example of King County's participation in regional efforts to reduce pollutants that could affect Puget Sound. The cleanup projects involve many parties and agencies and will address sediment contamination near CSO discharge locations. In the Duwamish Superfund Cleanup activities, 10 of the most highly polluted acres have been cleaned up to date, and another 35 have gone though the remediation design stage and are scheduled for clean up. King County participates in a source control work group convened to characterize existing sources of pollution entering the Duwamish waterway and to develop source control plans for all areas of the basin. These plans will help control potential contaminant sources to the Duwamish and prevent recontamination after sites are cleaned up.

Specific Permit Comments

We have additional specific comments on the permit:

- Section S18.B.2. *Annual CSO Report.* We request the last sentence of the first paragraph be changed to read: "In addition, this report must include a summary of the number of untreated discharge events

per outfall on a 20-year moving average, calculated once annually." This change is proposed in order to be consistent with the compliance evaluation process and other changes suggested below.

Ecology's Response: Ecology has changed the averaging period to twenty years, evaluated annually.

- Section S18.C. *Combined Sewer Overflow Reduction Plan Amendment.* We request that "based on 5-year average" be deleted from the first sentence in the second paragraph. The following sentence as it stands reads, "The Permittee must determine whether a CSO meets this regulatory requirement based on historic long-term discharge data, modeling, or other reasonable methods as submitted to Ecology." This sentence is different than the 5-year average reference, and it clearly explains the approved practice of determining whether a CSO meets the regulatory requirement.

  Ecology's Response: The 5-year averaging period has been deleted.

- Section S18.G. *Engineering Report and Plans and Specifications for CSO Reduction Projects.* The last sentence of the first paragraph should read, "The report should describe how the project will achieve the requirement of one untreated discharge per associated outfall per year." The existing proposed language suggesting 5-year averaging and using long-term historic data is unclear, confusing, and inconsistent with other guidance and permit requirements.

  Ecology's Response: Ecology has provided new language regarding this requirement. The new language is, "The report shall describe how a project will achieve the performance standard, as described in S18.K.1."

- Section S18.J.2. *Sediment Sampling and Analysis Plan.* The Comprehensive Sediment Quality Summary Report will be reviewed by Ecology and the length of that review is not determined. Without knowing the length of the review time, or the complexity of future sediment monitoring that will be required, we request that the time frame for the Sediment Sampling and Analysis Plan be changed to June 31, 2011.

  Ecology's Response: Ecology is dedicated to a timely review of the Comprehensive Sediment Quality Summary Report. The draft deadline for the SSAP of December 31, 2010 remains unchanged.

- Section S18.J.3. *Sediment Data Report.* As we commented in our December 15, 2008 comment letter (attached), collecting and analyzing sediments may be required as the result of Ecology's determination under S18.J.1. We are confused by the time frame for collection and analysis dictated as the "summer of 2011 and 2012." First, is there a technical reason why the samples must be collected in the summer? Is there a similar reason why the samples need to be analyzed in the summer as well? We request that the sample collection timeframe not be specified, but that the first sentence in the first paragraph under S18.J.3. be rewritten to read: "Following Ecology approval of the Sediment Sampling and Analysis Plan for the CSO outfalls, the Permittee must collect and analyze sediments according to the Plan." If sediment sampling is deemed needed, the county can accept the final date of January 1, 2013 for the data report submittal. However, without technical information supporting the time frames suggested, we object to the specification as to when the samples must be collected and analyzed.

Ecology's Response: The requested revision is not granted. In some instances, Ecology has observed increased toxicity during the summertime. Summertime periods have low dissolved oxygen levels which have an effect on metals speciation.

- Section S18.K.1. *Performance Standard for Controlled Combined Sewer Overflows.* This paragraph has redundant and possibly inconsistent statements throughout. We suggest that it be rewritten substantially beginning at the fourth sentence to explain how performance will be gauged for controlled CSOs. The language should be consistent with other sections of the permit, guidance and approved practices. The fourth and following sentences should be deleted and replaced with wording that is clear and consistent, such as, "For controlled CSOs, performance will be reviewed annually as part of the Annual CSO Report. Performance will be assessed using the available data beginning after the CSO is deemed controlled. Up to a 20-year moving average of data can be used. For newly-completed CSO control projects, success in achieving the average of one untreated event per year performance standard will be reported with the first NPDES permit renewal application in which there is five years of post-commissioning data. The average of available post-commissioning data will be reported annually as part of the Annual CSO Report. Compliance will be measured after 10 years of post-commissioning data is available, using the 10-year record and any mitigating information. Compliance will thereafter be reviewed annually using the growing body of data, and any mitigating information, until 20 years of data is available. After that, a 20-year moving average of overflow frequency will be used on into the future to measure compliance."

  Ecology's Response: Ecology has provided alternate language to the requested language. Ecology believes that a twenty year moving average is an acceptable averaging period. Past rainfall data coupled with modeling and actual discharge data (once the CSO is controlled) should be the basis for complying with the State's standard of one untreated discharge per outfall per year. Ecology does not believe it is acceptable to wait 5, 10 or 20 years, after a CSO project is implemented to gauge compliance with the State's standard. Compliance will be gauged annually.

Thank you again for the opportunity to comment. If you have any questions, please contact me at 206-263-3825 or Betsy Cooper, NPDES Administrator, at 206-263-3728.

Sincerely,

Pam Elardo, P.E., West Section Manager
Wastewater Treatment Division (WTD), Department of Natural Resources & Parks (DNRP)

Enclosure: Comment Letter dated 12/15/08

cc: Tricia Miller, Department of Ecology
Christie True, Division Director, WTD, DNRP
Betsy Cooper, Project/Program Manager IV, WTD, DNRP

Comments from Sierra Club

SIERRA CLUB
FOUNDED 1892

CASCADE CHAPTER

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RECEIVED
DEC 16 2008
DEPT OF ECOLOGY

Washington State Department of Ecology
3190 - 160th Avenue SE
Bellevue, WA 98008-5452
Attention: Tricia Miller, Permit Coordinator

December 15, 2008

Re: Comments on Draft Permit WA-002918-1, West Point Wastewater Treatment Plant

Dear Ms. Miller,

The Sierra Club appreciates the opportunity to provide comment on the referenced permit. Currently the discharge from the West Point treatment plant constitutes a third of the municipal wastewater discharged within the Puget Sound watershed. It is therefore very important that the permit reflect the need to improve the water quality of Puget Sound.

As you are aware the Partnership for Puget Sound recently published its Action Plan with substantial goals to be accomplished by the year 2020. An element of the plan is to prioritize and complete upgrades to wastewater treatment facilities to reduce pollutant loading.

You are also aware that the Department of Ecology intends to complete an AKART (All Known and Available Treatment) analysis with respect to the removal of nitrogen. Nitrogen is a key contributor to algal growth and related impacts on dissolved oxygen and shellfish toxicity in Puget Sound. The Department intends to complete this analysis by the fall of 2009. Our concern is the draft permit makes no mention of the pending AKART study.

If issued by the end of this year as per the current schedule of the administrative process the new permit will expire at the end of 2013. Presumably, the next permit would require King County to prepare an Engineering Report should the AKART analysis determine that AKART constitutes a level of treatment greater than what is currently employed at West Point. We however strongly believe that King County should be required to prepare the Engineering report in this permit cycle, with completion by December 31, 2013. Failing to do so would result in a loss of four years, four years which we cannot afford to lose given the needs of Puget Sound and the expectations of the public and elected officials in meeting the goals of the Puget Sound Action Plan.

We therefore urge that the Department include a provision in the permit that should the AKART analysis determine that AKART constitutes a level of treatment greater than what is currently employed at West Point, that an Engineering Report be completed in this permit cycle.

We request that the Department of Ecology hold a public meeting process including a public hearing. A permit of this significance deserves a full public process.

Cordially,

Tristin Brown
Cascade Chapter Conservation Chair

Ecology's Response to Sierra Club Comments:

Per Sierra Club and others' requests, Ecology held an open house, informal public meeting and formal public hearing on January 27, 2009.

The decision to require King County to incorporate nutrient removal into the West Point treatment process will be determined based on a demonstration of their direct contribution to a water quality impairment in Puget Sound. Ecology will be informed about West Point's contribution to the water quality impairments through the work presently being done in the South Sound DO Study and hydrodynamic modeling of Puget Sound.

If a water quality impairment is established, Ecology could then address the impairment in a variety of ways. Presently, water quality impairments are primarily addressed through the establishment of a total maximum daily load (TMDL) in which waste loads are allocated to waste dischargers, and individual permit limits are established based on the waste load allocations. Alternately, Ecology could determine that a certain class of dischargers, for example WWTPs, should all be required to treat using the best technology available. In this case, Ecology would determine the level of treatment that constitutes AKART, and would then establish permit limits based on the expected performance using the treatment technology.

At this time, Ecology has made no conclusions about the cause or extent of a water quality impairment in Puget Sound. Furthermore, no decisions have been made on how to best address water quality impairments in Puget Sound. Because of the lack of conclusive information at this time and the applicability of these studies to all discharges to Puget Sound, no specific information regarding these studies was initially included in the West Point fact sheet. Much of this information was discussed at the hearing and has been provided in the Responsiveness Summary.

AKART establishes technology-based limits. Technology-based limits are separate and distinct from water quality-based limits. The Technical and Economic Evaluation for Nutrient Removal at Wastewater Treatment Plants Study is not intended to determine the level or type of treatment that would constitute AKART for nutrients. The purpose of the study is to evaluate the treatment types available to remove nutrients from various types and sizes of WWTPs and their associated costs. It is not the intent of the study to decide or identify which treatment plants are required to upgrade their WWTPs to remove nutrients or is it to redefine AKART.

In order to best address your concern regarding West Point's plant upgrade to provide additional treatment to reduce nutrient level in the discharge, Special Condition S19 has been added to the permit. This condition includes a requirement that should Ecology conclude that there is a significant and quantifiable adverse impact on dissolved oxygen levels in South Puget Sound (via the South Puget Sound DO Study and Hydrodynamic Modeling), then King County will be required to submit a Nitrogen Reduction Study which will evaluate feasible alternatives to reduce nitrogen contributions from West Point WWTP's discharge.

Comments from Suquamish Tribe

13 February 2009

Tricia Miller
Water Quality Permit Coordinator
Washington Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98005

Subject: Water Quality Permit Reissuance on King County's West Point Wastewater Treatment Plant and Combined Sewer Overflow System – NPDES Permit No. WA-002918-1.

VIA EMAIL

Dear Ms. Miller:

King County's West Point Wastewater Treatment Plant and several of its CSOs are located within and discharge to waters that are part of the Suquamish Tribe's Usual and Accustomed Fishing Grounds and Stations. Among the rights reserved by the Tribe in the Treaty of Point Elliott are the rights to harvest fish and shellfish at all of its Usual and Accustomed (U&A) Fishing Grounds and Stations. Discharge of treated and/or untreated wastewater and stormwater may interfere with the Tribe's safe harvest of fish and shellfish within its U&A areas. In addition, pollution discharged with treated and untreated wastewater can degrade water quality and other ecological conditions characteristic of healthy ecosystems – conditions that sustain tribal resources and traditions. The Tribe recognizes and appreciates King County's commitment to and investments in water quality improvement as expressed in its Comprehensive Water Pollution Abatement Plan, including the County's efforts to control and/or eliminate treated and untreated CSO discharges.

The Tribe's principal concern with this permit reissuance is that it does not address the potential long-term effect of discharges from West Point Treatment Plant and CSO outfalls at Carkeek and North Beach on the successful certification for commercial harvest of the Richmond Beach Geoduck Tract (06100).

The Richmond Beach tract is located between Point Wells on the north and Meadow Point on the south. Shallow outfalls at Carkeek and North Beach are located immediately adjacent to the Richmond Beach Tract. The West Point outfall is located approximately 3 miles to the south. Recently, the Suquamish Tribe and the Washington Department of Health have been evaluating the status of contaminants in the tissues of geoducks from the Richmond Beach Tract (06100). This is the logical first step in a process that the Tribe hopes will result in certification of the tract for commercial harvest. A necessary second step in this process is to delineate closure zones around wastewater outfalls that could impact the tract. Finally, shoreline surveys and water quality studies would be required before commercial shellfish harvest could be certified.

Virtually the entire eastern shoreline from Everett to Tacoma is currently unclassified and essentially closed to commercial and recreational shellfish harvest. As a result, shellfish closure zones for wastewater outfalls (including those covered by this permit) have not been developed. In order to understand the effect of these permitted discharges on the harvest of shellfish (the exercise of a beneficial use), the Tribe requests that King County develop these closure zones for its outfalls in the vicinity of the Richmond Beach tract as part of the NPDES permit reissuance process. It is the Tribe's understanding that King County has developed CORMIX (the model used by WDOH to establish closure zones) models for this permit to determine dilution factors for West Point and Carkeek oufalls. With some modification, the existing CORMIX models could be used to establish outfall closure zones for shellfish harvest and therefore assist the Tribe in its efforts to certify the Richmond Beach Tract.

Shellfish are resources of very high value to the economy and culture of the Suquamish Tribe. Unfortunately, many of these resources are inaccessible to the Tribe due to past and ongoing pollution and contamination. The Puget Sound Partnership estimates that 30,000 acres of Puget Sound shellfish beds are currently closed to commercial or recreational shellfish harvest due to pollution. In its recently published Action Agenda, the Partnership sets a goal of reducing this closure area by 10,000 acres before 2020. Reaching this goal will require the control of pollution from both point and non-point sources of pollution regulated under NPDES. More importantly, it will require the continued collaboration of local, state, and tribal governments and concerned citizens.

Thank you for considering the Tribe's comments on this proposed NPDES permit reissuance. If you have any questions, please contact me directly.

Sincerely,

Tom Ostrom

(360) 394-8446

Cc: Betsy Cooper, King County WWTD NPDES Administrator

Ecology's Response to the Suquamish Tribe's Comments:

Ecology acknowledges and respects the Suquamish Tribe's rights to harvest fish and shellfish at all of its Usual and Accustomed Fishing Grounds and Stations. While Ecology understands the Suquamish Tribe's concerns, Ecology does not have jurisdiction over closure zones for shellfish harvesting. The Department of Health has jurisdiction over establishing closure zones near outfalls and certifying tracts acceptable for commercial shellfish harvesting. Ecology recommends that the Suquamish Tribe make a formal active, classification request to the Department of Health regarding the Richmond Beach tract. Once this request has been established, Ecology will gladly provide any previous dilution information or ambient data to Department of Health for their assessment. Ecology will also encourage King County to provide any ambient monitoring data to the Department of Health and work with the Suquamish Tribe and Department of Health regarding additional sampling and modeling that is agreeable to all parties involved.

Comments from MWPAAC

Metropolitan Water Pollution Abatement Advisory Committee

King Street Center, 201 South Jackson Street, MS KSC-NR-0512
Seattle, WA 98104 206-263-6070

January 30, 2009

To: Tricia Miller, Permit Coordinator
Washington State Department of Ecology
Northwest Regional Office
3190 -160th Avenue SE
Bellevue, WA 98008-5452

SUBJECT – Draft NPDES permit No. WA-002918-1 for West Point Treatment Plant, combined sewer overflow (CSO) treatment facilities and West service area.

The Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC) is a committee that advises the King County Council and King County Executive on matters related to water pollution abatement. MWPAAC was created by state law (RCW 35.58.210) and consists of representatives from cities and local sewer districts that operate sewer systems within the counties of King, Pierce and Snohomish. Thirty-four of these cities and sewer districts deliver sewage to King County for treatment and disposal. MWPAAC offers the following comments on the draft NPDES permit No.WA-002918-1 for West Point Treatment Plant, combined sewer overflow (CSO) treatment facilities and West service area.

We urge the Department of Ecology (DOE) not to include additional permit conditions at this time.

MWPAAC believes King County should use the most cost effective best practices in operating its facilities. We believe the current permit, as written, does require the use of best practices. We understand the draft permit also includes requirements for 1) modifying the disinfection system and 2) completing additional CSO control facilities, each requiring major capital expenditures, and that the draft permit also requires additional data reporting. We believe these permit requirements are reasonable and will contribute to the improvement of the treatment and conveyance systems and provide the agency and the public with important information to assure that these systems are being operated properly.

There are a number of ongoing studies and modeling (MWPAAC is aware of at least eight) to assess and help develop a comprehensive plan in restoring the health of Puget Sound. One of those studies was the recent survey of sources of pollution to the Sound in conjunction with the Puget Sound Partnership. This effort reported there are many sources of toxicants and nutrients, with stormwater perhaps being the most pressing to address. DOE should wait for the completion of these studies and the results of these studies should be evaluated before permit changes are proposed.

Tricia Miller
January 30, 2009
Page 2

It is clear to MWPAAC that there needs to be a comprehensive approach to dealing with the many challenges facing cleaning up Puget Sound. MWPAAC also believes that it is critical that sound science and information be the drivers for change. We urge DOE to take a comprehensive approach in looking at restoring the health of Puget Sound.

With the limited public resources that are being strained by the current economic situation it becomes even more critical that public resources are invested wisely. Therefore, DOE must proceed carefully and require reductions in current discharges only after the dynamics of the Puget Sound system are better understood and it is reasonably certain that reductions will achieve environmental objectives in a cost-effective manner. **We urge DOE to not include additional permit conditions at this time. If additional permit conditions are added we request that any new pollution control efforts be targeted carefully for maximum effectiveness in improving the health of the Sound and its aquatic life.**

Sincerely,

Scott Thomasson,
Chair

cc: MWPAAC Members
King County's Regional Water Quality Committee Members
Christie True, Director, Wastewater Treatment Division, King County Department of Natural Resources and Parks
Pam Elardo, Manager, West Section, WTD, KCDNRP

Ecology's Response to MWPAAC's Comments:

Ecology appreciates MWPAAC's comment that the permit requirements are reasonable and will improve the treatment and conveyance systems. Ecology agrees with MWPAAC's comment that there are many inputs and sources of pollution that are affecting Puget Sound and not just King County's West Point and CSO outfalls. Ecology also agrees that a regional and systematic approach, based on sound scientific information, needs to be the basis for addressing the health and well being of Puget Sound. Ecology believes that improvement strategies should be targeted geographically to achieve the greatest benefit, in a cost-effective manner.

MWPAAC requests that no additional permit conditions be added for the final permit. However, Ecology has added some additional requirements as a result of others' comments. These additional requirements do not result in major capital investments at this time.

Comments from Helen Engle

Jay Manning, Director
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

RE: West Point Wastewater Treatment Plant draft NPDES Permit (WA-002918-1)

Dear Jay Manning:

This letter is to comment on the West Point Wastewater Treatment Plant Draft NPDES

Permit.

As a past president of Washington Environmental Council as well as People For Puget Sound, I am well aware of the ongoing management challenges you are facing.

IT IS TIME TO SPEAK OUT BOLDLY with a plan to strengthen the permit. We know what has to be done, and your agency must take a strong and positive position immediately.

Let the Puget Sound Partnership know that the Dept. of Ecology will take DECISIVE STEPS TO UPGRADE TO TERTIARY TREATMENT.

I join the other voices calling for a public hearing on the subject of the West Point Facility's Permit as soon as possible.

Thank you for your consideration.

Sincerely,

Helen Engle
4011 Alameda Avenue
University Place WA 98466
Phone: 253-564-3112
hengle@iinet.com

Ecology's Response to Ms. Engle's Comments:

Per Ms. Engle's and other requests, Ecology held an open house, informal public meeting, and formal public hearing on the Draft West Point NPDES permit on January 27, 2009.

The requirement to upgrade to tertiary treatment at the West Point WWTP needs to be based on evidence that this discharge is 1) causing problems in Puget Sound; 2) tertiary treatment is technologically and financially feasible at this facility and 3) it is the only option to addressing water quality problems. For the last four and a half years, West Point WWTP's discharges have had no effluent permit violations and the reasonable

potential calculations indicate that their discharges do not have a reasonable potential to violate any of the water quality standards for Puget Sound.

Ecology is currently conducting a Technological and Economic Evaluation of Wastewater Treatment Plants Study of over 200 wastewater treatment plants in the State of Washington. This evaluation will analyze the costs and benefits of upgrading existing plants to remove nitrogen and phosphorus. This Study will also evaluate the West Point WWTP and will provide general information on the treatment types available to remove nutrients and the associated costs. It is not the intent of the study to decide if the West Point WWTP should be upgraded to remove nitrogen from its discharge but rather to provide information if a subsequent decision needs to be made.

Ecology is also conducting a South Puget Sound Dissolved Oxygen Study and a Puget Sound Hydrodynamic Modeling Study. These studies are expected to be completed by December 2010 and will provide information on West Point WWWTP's impact on dissolved oxygen levels in South Puget Sound.

A new, special permit condition (S19) has been added since the draft permit. In essence, this special permit condition requires King County to submit a Nitrogen Reduction Study if it is shown that West Point's WWTP has a significant and quantifiable adverse impact on dissolved oxygen levels in Puget Sound.

Comments from Keith Hutchings

TRICIA MILLER
PERMIT COORDINATOR
DEPARTMENT OF ECOLOGY
3190 160TH AVE SE
BELLEVUE WA 98008-5452

RECEIVED FEB 09 2009
FEB 10 2009 DEPT OF ECOLOGY
ECOLOGY

SUBJECT: PUBLIC HEARING OF WEST POINT WASTEWATER TREATMENT PLANT
PERMIT OF JAN. 27, 2008

DEAR MS. MILLER:

LIKE MANY PEOPLE WHO ATTENDED SUBJECT HEARING I WAS DISAPPOINTED AND CONFUSED. DISAPPOINTED BY THE POOR QUALITY OF THE SOUND SYSTEM AND CONFUSED BY THE PRESENTERS LACK OF CONCERN TOWARD ENVIRONMENTAL REALITIES.

AFTER TALKING TO THE PERSON IN CHARGE OF THE BUILDING'S SOUND SYSTEM, IT WAS EVIDENT PEOPLE FROM WWTP WERE INEPT. NOT ONLY WERE THERE FREQUENT BREAKDOWNS, VOICES THROUGH THE SOUND SYSTEM ALL SOUNDED AS THOUGH THEY HAD A SPEECH IMPEDIMENT OR MUSH IN THEIR MOUTH! ONE WAS LEFT WITH THE IMPRESSION THE HEARING WAS NOT MEANT TO BE HEARD.

ADDRESSING ENVIRONMENTAL CONCERNS WAS NOT ON THE AGENDA. THE "POWER POINTS" INDICATED STANDARDS ARE CONSTANTLY MET – SHOWING NO NUMERICAL DATA. WE DIDN'T SEE ANY PERCENTAGES INDICATING HOW WELL THE TARGETS WERE MET.

IT WOULD HAVE BEEN NICE TO HEAR A REALIZATION OF THE PUBLIC'S CONCERN ABOUT THE HEALTH OF PUGET SOUND AND EFFORTS BEING MADE TO CONTRIBUTE TO THE GOALS OF THE PUGET SOUND PARTNERSHIP.

WILL THEY EVER MONITOR PHARMACEUTICALS, CARCINOGENIC METALS, PESTICIDES AND CARBON DIOXIDE?

MAYBE THE DEPARTMENT OF ECOLOGY NEEDS TO TIGHTEN THE PERMIT REQUIREMENTS.

YOURS TRULY,

Keith Hutchings

KEITH HUTCHINGS

Ecology's Response to Mr. Hutchings' Comments:

Ecology is concerned about the health and well being of Puget Sound. As mentioned in the public meeting on January 27, 2009, Ecology is currently conducting a number of studies examining the water quality of this important waterbody and examining treatment methods from wastewater treatment plants (WWTP). Please understand that the public hearing was specific to the West Point WWTP and CSO system NPDES permit and not the specific goals of the Puget Sound Partnership.

In regard to the facility's sound system, we apologize if you had difficulty in hearing. Included in this responsiveness summary is a transcript of the hearing for your use. After the informal public meeting and formal public hearing, we received the following comment from People For Puget Sound, "thank you for conducting such a good public meeting and hearing tonight. The general consensus was that it was well run, very clearly presented (if a tad long) and responsive to the public who commented."

If you have any further questions or concerns, please contact Mark Henley at 425-649-7103 or mahe461@ecy.wa.gov for further assistance.

Comments received via email form letters

Email Form Letters – Standard Versions via People For Puget Sound's Webpage

Version 1: ~320 emails received from 12/8/08 to 1/13/09, some emails included additional comments as summarized in the following table.

Dear King County Executive Ron Sims and DOE Director Jay Manning,

On Dec 1, the Puget Sound Partnership adopted the Action Agenda to restore the health of Puget Sound by 2020 and yet decisions being made today will be determine the Action Agenda's success. The West Point Wastewater Treatment Facility - 30% of the Sound's sewage input - permit is a key example.

We ask you to strengthen the permit by: a) Beginning the steps to upgrade from secondary to tertiary treatment, b) Addressing toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, c) Finding out if toxic chemicals are bioaccumulating and biomagnifying near the outfall, and more.

Due to the serious impacts the West Point facility has on Puget Sound, we request a public hearing to be held in January.

Ecology's Response

Ecology has various studies that are currently being conducted to address concerns mentioned in the above e-mail. Specifically, Ecology has initiated a Pharmaceuticals (including endocrine disrupting compounds) and Personal Care Products (PPCPs) in Wastewater Study, a Toxics Loading Study, a Feasibility Study for Nutrient Removal at WWTPs, and a South Sound Dissolved Oxygen Study. All of these studies will provide valuable information to Ecology staff once completed.

In regard to upgrading WWTPs from secondary to tertiary treatment, this technology-based requirement is a far-reaching programmatic decision and is not implemented in a piecemeal, permit by permit approach. In relation to bioaccumulation and bio-magnification, Ecology does not currently have the tools or criteria to move forward with this type of evaluation. Instead, Ecology relies on whole effluent toxicity (WET) testing. WET testing has an established legal basis in rule.

Per the public's request, Ecology held an open house, informal public meeting, and a formal public hearing on January 27, 2009.

Version 2: ~60 emails received from 1/22/09 to 1/29/09, some emails included additional comments as summarized in the following table.

Dear Executive Ron Sims and Director Jay Manning,

On Dec 1, the Puget Sound Partnership adopted the Action Agenda to restore the health of Puget Sound by 2020 and yet decisions being made today will determine the Action Agenda's success. The West Point Wastewater Treatment Facility - 30% of the Sound's sewage input - permit is a key example.

We ask you to strengthen the permit by: a) Beginning the steps to upgrade from secondary to tertiary treatment, b) Addressing toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, c) Finding out if toxic chemicals are bioaccumulating and biomagnifying in organisms near the outfalls, **d) More aggressively reduce the toxic loading associated with combined sewer overflows., and more.**

Planning now for the future is essential, especially with the anticipated increase in population in the Puget Sound Basin.

Ecology's Response

Please see Ecology's response to Version 1 above. In regard to the bold-type font in Version 2 above, Ecology is addressing possible toxic loadings from CSOs via the CSO control projects. Please see Special Condition S18 of the permit.

Version 3: ~15 emails received from 1/30/09 to 2/13/09, some emails included additional comments as summarized in the following table.

Dear Executive Ron Sims and Director Jay Manning,

I am asking for an improved permit. On Dec 1, the Puget Sound Partnership adopted the Action Agenda to restore the health of Puget Sound by 2020 and yet decisions being made today will determine the Action Agenda's success. The West Point Wastewater Treatment Facility - 30% of the Sound's sewage input - permit is a key example. The first step to effectively clean up our local Superfund sites is controlling the ongoing sources of pollution -- this will save taxpayers millions of dollars in the long run.

Please strengthen the permit by: a) Creating triggers based on Ecology's studies, that will begin the steps to upgrade from secondary to tertiary treatment, if West Point is shown to be a nutrient problem, b) Addressing toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, c) Finding out if toxic chemicals are bioaccumulating and biomagnifying in organisms near the outfalls, d) More aggressively reduce the toxic loading associated with combined sewer overflows., and more.

In addition, please extend the comment period until after the public is provided two key documents related to the permit renewal - a copy of the EPA Compliance Report and an approved King County CSO Plan.

Planning now for the future is essential, especially with the anticipated increase in population in the Puget Sound Basin.

Ecology's Response

Please see Ecology's responses to Versions 1 and 2 above. Ecology extended the public comment period for approximately two weeks after the date of the formal, public hearing. Ecology chose to not extend the public comment period a second time to accommodate the above request.

Table 2: Form emails received from

Name	Email Address
A.E. White	aw95@comcast.net
Aerica Banks	banksa@seattleu.edu
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Table 3: Additional comments received via form emails.

Name	Email Address	Added Wording to Standard
Aerica Banks	banksa@seattleu.edu	I realize that King County is facing a severe economic shortfall due to the recession; while strengthening the permit may not be realistic immediately, holding public hearings is a very realistic and very important next step. The public deserves to know about the West Point facility and the impact it will have on their water. Thank you for your consideration.
Ahlyshawndra Means	arbdmks@comcast.net	This is very important to me and to many of us living in the beautiful Puget Sound, and we wish to keep it this way. Thank you for attention to this matter.
Ahlyshawndra Means	arbdmks@comcast.net	Since we shouldn't be dumping any wastes into Puget Sound at all, at the very least we need to monitor more strictly what is still going into it now.

Name	Email Address	Added Wording to Standard
Andrea Faste	amfaste@COMCAST.NET	Please give serious consideration toward beefing up the permit requirements at the West Point Wastewater Treatment Facility. I agree with People for Puget Sound that if one third of the treated sewage from our area is coming from this plant, we need to be looking at ways to strengthen the "treatment" so the least possible toxins are flushed into Puget Sound. I have lived near the Sound since 1945, and I have seen the slow decline. The press of population and our continuing attitude that salt water can absorb our sewage have conspired to get us to this point. We have to do better.
Ann Stevens	annbstevens@earthlink.net	It will take time to make effective changes and that is why the initial steps need to happen immediately. The state Department of Ecology and King County need to show their leadership; that they understand the dire, though not readily observable, consequences of business as usual.
Anne Woodley	a.woodley@comcast.net	We need to make industry accountable even if it costs a bit more and have people pay on the front end for problems instead of leaving a legacy that we all have to live with.
Aric Devens	aricdev@gmail.com	As a member of the greater Seattle community and as someone who works near the Duwamish (Georgetown and Southpark) I request that you act strongly on this subject for the sake of myself and the Puget Sound community.
Barbara Matthes	bamatt@comcast.net	Clean air and clean water are lifelines for ALL of US! Physical health, economic health and ecological health are at stake --now and in the future. Please take a closer look at what is motivating us as concerned citizens to address this issue. It is our most vulnerable populations at risk...the unborn, the young who are our future---and the marine life of the Sound that contributes to our economy in myriad ways. Thank you for your service and willingness to "dig deeper" in these issues.
Bill Bear	flyingbear2@gmail.com	According to the projections for increased poulation in the region the enviornmental impact of the status quo in waste water treatment is increased environmental destruction. This is in clear violation of the requiremnts of the Growth Management Act.

Name	Email Address	Added Wording to Standard
BJ Cummings	bj@duwamishcleanup.org	The Duwamish River Cleanup Coalition has reviewed the draft NPDES permit for the West Point Sewage Treatment Plant, and People for Puget Sound's comments on the draft permit and fact sheet. DRCC is especially concerned with the portions of the permit related to the system's Combined Sewer Overflows (CSOs) on the lower Duwamish River, a federal Superfund and Washington State MTCA cleanup site. King County is expected to revise its CSO control plan in the near future, and should be guided by requirements in the revised permit. In order to fully explore these and other issues important to sediment and water quality in the Dwuamish and throughout the Seattle area, DRCC requests an extension of the public comment period and a Public Meeting on the draft permit early in 2009. Sincerely, BJ Cummings Coordinator
BJ Hedahl	bjhedahl@hotmail.com	THANK YOU for liistening to the environment that YOU live in! MORALS or MONEY; what runs this Region and YOUR life??
Bryony Angell	bryony_angell@hotmail.com	As a resident of Seattle and someone who cares deeply about the health of Puget Sound, I am speaking up for changes that can be made for the betterment of Puget Sound's future. I am just one person but it's people like me and the collaboration of groups and agencies to work together to make sure Puget Sound is restored. I am discouraged by the "dilution is the solution" mentality of West Point, and that the effort to improve the health of Puget Sound can be thwarted by decisions made in this limbo time. Even more so am I concerned that not even a public hearing is planned to allow citizens like me to have a say in the dispelling of waste water into the Sound.

Name	Email Address	Added Wording to Standard
Claudia Navas	claudian4@hotmail.com	SUBJECT: West Point Wastewater Treatment Plant Draft NPDES Permit (WA-002918-1) As citizens, we are concerned that the West Point Wastewater Treatment Facility permit renewal does not align with the Action Agenda adopted by the Puget Sound Partnership. Not only does the facility discharge almost 30% of the treated sewage into Puget Sound but King County controls their combined sewage and stormwater overflows into local waters, including the Duwamish River – a federal Superfund site. Both contribute a significant load of toxic chemicals into our waters, harmful for the environment and human health. In order to restore the health of the Duwamish River and Puget Sound, we ask you to strengthen the permit by: a) Beginning the steps to upgrade from secondary to tertiary treatment, b) Addressing toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, c) Finding out if toxic chemicals are bioaccumulating and biomagnifying in organisms near the outfalls, d) More aggressively reduce the toxic loading associated with combined sewer overflows., and more. Planning now for the future is essential, especially with the anticipated increase in population in the Puget Sound Basin. Please support a cleaner, healthier Duwamish River and Puget Sound for generations to come. Respectfully; The Green Party of King County; Marjorie Rhodes, chair@kingcountygreens.org letter written by member Claudia Navas
Dagmar Cronn	cronn@oakland.edu	I was particularly disappointed to learn at the hearing that the amount of discharge from the West Point Wastewater Treatment Plant would only increase over time based on the proposed permit, which I vigorously oppose.
Dan Ritchie	ohopdiver@aol.com	There are two fishing and SCUBA diving sites near West Point. On the south side at 1.6 miles from West point is a pair of 200 foot barges sunk .6 mile west of Four Mile Rock. On the north side at 1.0 mile from West Point are two 200 foot barges, a 20 foot rock and an 85 foot tug. Both sites provide significant sea life habitat and recreational oportunities for diving and fishing. These sites provide habitat for Ling cod, rockfish, perch, octopus, wolf-eel, sculpins, crabs, decorated warbonnets, painted greenling, sole, flounder, cabezon, barnacles, sea anemones and sea cucumbers.

Name	Email Address	Added Wording to Standard
Darcie Larson	darcielarson@yahoo.com	I urge you to please take action to strengthen the West Point Wastewater Treatment Facility permit, as a first step to actually cleaning up Puget Sound. The Puget Sound Partnership released it's Action Agenda, and now we need to walk the talk! Please strengthen the permit by: a) Beginning the steps to upgrade from secondary to tertiary treatment, b) Addressing toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, c) Finding out if toxic chemicals are bioaccumulating and biomagnifying in organisms near the outfalls, and more. I am dismayed that no public hearings on this permit are scheduled. Please schedule an opportunity for the public to give their input ASAP.
Diane Stone	gregdi@whidbey.com	I and my family totally support efforts to clean up Puget Sound, expensive though these efforts may be. Therefore, we are quite upset by the amount of treated sewage discharged by the West Point Wastewater Treatment Facility into Puget Sound. We are so exasperated by watching State and local governments work at odds with each other. Please work together to do the right thing for Puget Sound. Department of Ecology, please don't disappoint us! We endorse and support the following points from People for Puget Sound: On Dec 1, the Puget Sound Partnership adopted the Action Agenda to restore the health of Puget Sound by 2020 and yet decisions being made today will determine the Action Agenda?s success. The West Point Wastewater Treatment Facility - 30% of the Sound's sewage input - permit is a key example. We ask you to strengthen the permit by: a) Beginning the steps to upgrade from secondary to tertiary treatment, b) Addressing toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, c) Finding out if toxic chemicals are bioaccumulating and biomagnifying in organisms near the outfalls, d) More aggressively reduce the toxic loading associated with combined sewer overflows., and more. Planning now for the future is essential, especially with the anticipated increase in population in the Puget Sound Basin.

Name	Email Address	Added Wording to Standard
Donna Nickerson	d.j.nick@comcast.net	As a waterfront owner and clam grower on Eld Inlet in Southern Puget Sound, water quality is especially important for my family. My husband and I have been diligent stewards of our waterfront property, taking care to ensure that we are not making a negative contribution to the Sound's water quality or ecosystem processes. We have high expectations of our government to do the same. On Dec 1, the Puget Sound Partnership adopted the Action Agenda to restore the health of Puget Sound by 2020 and yet decisions being made today will determine the Action Agenda?s success. The West Point Wastewater Treatment Facility - 30% of the Sound's sewage input - permit is a key example. I am writing to ask you to, first, strengthen the permit by: a) Beginning the steps to upgrade from secondary to tertiary treatment, b) Addressing toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, c) Finding out if toxic chemicals are bioaccumulating and biomagnifying in organisms near the outfalls, and more. Secondly, due to the potential serious impacts the West Point facility has on Puget Sound, I request a public hearing to be held in January.
Donna Snow	dsnow3@comcast.net	Protecting Puget Sound must be of utmost importance to protect the marine life and environmental conditions. The Orca population is already declining.
Elise Koncsek	eliselk@gmail.com	I've seen the processes currently in use at the West Point Wastewater Treatment Facility, and I have seen how toxic chemicals flow right through the system into Puget Sound. With the recent adoption of the Puget Sound Action Agenda, now is the time to take the steps to improve the facility so that it keeps dangerous chemicals out of the Sound. Please modify the permit to require enough processing of wastewater to keep Puget Sound safe. Thank you in advance for making these changes
Elizabeth Ellis	ictrees4u@yahoo.com	I was shocked to hear recently that salmon can detect traces of spices in Pueget Sound and it is quite like ly that these and other human byproducts are harmful to habitats and marine wildlife health.
Elizabeth Tomicki	wingsforwisdom@gmail.com	I thank you for hearing this matter and paying attention by taking the steps necessary to properly care for our Sound, ensuring better health and future's for all. To have peace on earth, we must be at peace with earth and this is one more possible step in a good direction.
Emily MacRae	egmacrae@yahoo.com	Please notify me as to your actions in this critical matter,

Name	Email Address	Added Wording to Standard
Fred Felleman	felleman@comcast.net	While we support much of the Partnership's attention directed to non-point discharges impacting the Sound, it is critical that we do not lose site of the large point sources as well. Fred Felleman NW Consultant Friends of the Earth
Gayle Janzen	cgjanzen@comcast.net	We can't continue to do business as usual. Puget Sound needs our help and without significant improvements to the West Point Treatment Permit, we will continue to degrade our beloved Sound. The declining orca population is just one example of how polluted this body of water is. I urge you to upgrade form secondary to tertiary treatment and begin a more comprehensive examination of the chemicals, pharmaceuticals, etc. that are being dumped into our water. Improving West Point's Permit would be a giant step towards restoring Puget Sound to health.
Gerald Larson	larsong@comcast.net	I'm in total agreement with the following statement. Ecology is in the business of allowing pollution and then looking back at problems created. Sewage treated or raw is dumped into the sound to dilute it. We need to find a new direction.
Ginny Ballard	ginnylsanchez@yahoo.com	Due to the potential serious impacts the West Point facility has on Puget Sound, I request a public hearing to be held in January. As an environmental educator, I realize the importance of educating citizens on stormwater and wastewater impacts so that they can contribute to decisions that affect us all. Citizens have a right to voice their concerns and desire for better wastewater treatment and environmental stewardship practices.
Heather Grube	hmgrube@hotmail.com	The partnership will fail if we continue to allow the discharge of untreated sewage into Puget Sound.
Heidi Siegelbaum	wastenot@speakeasy.net	You were both involved in the initial Partnership proceedings and as you may recall, the Partnership received nearly 400 comments from external parties, many of which concerned mixing zones and toxins. Unfortunately, these comments were not incorporated into future iterations of what became the action agenda.
Helan Engle	hengle@iinet.com	As a past president of Washington Environmental Council as well as People for Puget Sound, I am well aware of the ongoing management challenges you are facing. IT IS TIME TO SPEAK OUT BOLDLY with a plan to strengthen the permit. We know what has to be done and our agency must take a strong positive position immediately. Let the Puget Sound Partnership know that the Dept. of Ecology will take DECISIVE STEPS TO UPGRAD TO TERTIARY TREATMENT. I join other voices calling for a public hearing on the subject of the West Point Facility's Permit as soon as possible. Thank you for your consideration, Sincerely, Helen Engle
James Eby	jimeby@hotmail.com	This is James Eby and I approve this message.

Name	Email Address	Added Wording to Standard
Janet ONeil	joneilfive@yahoo.com	If we are all working to clean-up and preserve the Sound, why would this Treatment Facility be allowed to operate in such a harful way? Shouldn't we have learnd by now that prevention is cheaper and easier?
Jesse Moore	gtownjesse@comcast.net	A clean Sound is the cornerstone of a successful future for all life in the Pacific Northwest! Please help to see that our laws and legislation reflect this. Thank you.
Jim Schafer	jimsch43@comcast.net	Please, help all the citizens of this state by helping to clean up Puget Sound-that is what we want.. I actually saw some Dolphins near the Tacoma Narrows last Friday, the first time I have seen them that far south - clean water is so important to the ecosystem, but it shows. Dungeness crab are showing up in South Sound for the first time in 30 years or more. You have the legal authority to make it work, so lets have a hearing and proper review and do the right thing. Times are changing! Please help us clean up the toxins.
Joan Temple	joan.temple@gmail.com	A GREAT DEAL OF MONEY IS BEING SPENT TO BENEFIT THE SOUND. IT ONLY MAKES SENSE THAT LOCAL GOVERNMENT SHOULD FULLY SUPPORT THE EFFORT.
Joe Ginsburg	bluebotl@aol.com	If we're to restore the health of Puget Sound by 2020, we can't just continue business as usual for our wastewater discharges. King County's West Point Wastewater Treatment Facility discharge permit should include: Genuine source tracing to find the toxic chemicals and reduce them. West Point's mixing zone allows for toxic chemicals to continue to be discharged. Mixing zones need to be phased out! Source tracing will get us started. Finding out if toxic chemicals are bioaccumulating and biomagnifying in aquatic life near the outfall. Addressing emerging chemicals such as pharmaceuticals and endocrine disruptors. Male fish in Elliott Bay are being feminized and we need to correct this. More aggressively reducing the toxic loading associated with combined sewer overflows. Planning for increased reclaimed use of highly treated wastewater for irrigation, flushing toilets and more. Taking the first steps towards upgrading from secondary to tertiary treatment. West Point is the largest load of sewage nutrients into Puget Sound! Dilution is the solution? is no longer effective in the 21st century!
Joel and Lucinda Wingard	wingardjl@comcast.net	For all our sakes, we as residents of Gig Harbor and members of People for Puget Sound join in requesting that the West Point Wastewater Treatment Facility permit be strengthened.

Name	Email Address	Added Wording to Standard
John (Jack) de Yonge	jdeyonge@gmail.com	Separate letter attached Please find below and also attached a letter from the Wise Use Movement asking for a public hearing on the proposed NPDES permit for the West Point Wastewater plant. Naturam Expellas Furca Tamen Usque Recurret WISE USE MOVEMENT P.O. Box 17804, Seattle, WA 98127 December 13, 2008 Jay Manning Director Washington State Department of Ecology P.O. Box 47600 Olympia, WA 98504-7600 Via E-mail: kbur461@ecy.wa.gov, tmil461@ecy.wa.gov *RE: West Point Wastewater Treatment Plant draft NPDES Permit (WA-002918-1)* Dear Mr. Manning: The following are the comments of the Wise Use Movement on the West Point Wastewater Treatment Plant Draft NPDES Permit (WA-002918-1)/,/dated November 14, 2008. // Because the draft NPDES Permit covers the largest municipal treatment discharger into Puget Sound, the Wise Use Movement requests that a public hearing be held to take public testimony on the shortfalls of the draft permit. In general, the West Point permit should: * begin the transition to tertiary treatment to bring the West Point plant into compliance with AKART (all known and reasonable technology). * develop a plan for moving the treatment plant out of Discovery Park and off the Puget Sound shoreline, a shoreline of state wide significance. * eliminate mixing zones. The current and proposed mixing zones do not protect Puget Sound, its habitat or its sediment. A mixing zone for toxic discharges is not a pollution control option for toxic substances, especially those which accumulate in sediments or marine species.

Name	Email Address	Added Wording to Standard
		* set discharge limitations for endocrine disrupters and develop a plan for source control. * re-evaluate the industrial pre-treatment program and develop a plan for industrial reuse of wastewater for the sixty-four industrial users discharging into the West Point plant. In addition we are concerned about the recently published Ecology study, “Control of Toxic Chemicals in Puget Sound*, *Phase 2: Improved Estimates of Loadings from Dischargers of Municipal and Industrial Wastewater (September 2008* - *Publication Number 08-10-089). According to this study 180 facilities were surveyed, 105 (58 percent) were municipal wastewater treatment facilities, and 75 (42 percent) were industrial facilities. Of the 105 municipal facilities, 10 had neither flow nor priority pollutant data and therefore were not included in the pollutant loading calculations. Another 40 municipal treatment plants did not have priority pollutant data, but did have discharge flow data (page 6). This represents an astounding failure of EPA, the Department of Ecology, and Governor Gregoire to carry out a viable NPDES permit program in the state of Washington. The lack of basic flow data or priority pollutant data for municipal treatment plants is inexcusable and should be grounds for a complete EPA review of the NPDES program it delegated to the state. The picture is no better for industrial polluters. According to the study, “Of the 75 industrial facilities, a total of 25 industrial facilities lacked flow data. The number of industrial facilities that lacked pollutant concentration data varied by pollutant. Since no reasonable assumption could be made to allow estimating the effluent character of these different industries, industrial facilities with no flow or concentration data were retained in the master list but were not included in the loading calculations” (page 6). How is it possible that Ecology could not identify 33 percent of industrial NPDES discharge flow data? As Ecology Director, Gregoire ran the NPDES program into the ground as the following Seattle P-I headline from September 20, 1991 attests: "Controlling water pollution too big a job, state chief admits." According to the P-I, "The State Ecology Department pledged yesterday to

Name	Email Address	Added Wording to Standard
		improve its much-criticized permit system for controlling water pollution, but admitted that the job is just too big." "And some smaller facilities will simply be left without permits, she [Gregoire] said." "A 1990 report of the Governor's Efficiency Commission panned the program as badly underfunded, mismanaged, disheartened, and overwhelmed by its job." Now, nearly 20 years later, after decades of watching Puget Sound turn into a sewer and whispering tsk-tsk about it and worrying that even one tsk or a tut might upset city or industrial polluters, the State Department of Ecology's top brass seem to prefer to continue dithering rather than begin using the department's legal muscle to force the steps necessary to start cleaning the filthy mess lapping our shorelines. It's time to stop excusing and to start that clean up. The West Point Sewage Treatment Plant has to be a place to start. And there needs to be a public hearing on how to strengthen and improve the West Point NPDES permit, because it's plain there are better ways to do that than what the Department of Ecology presently proposes. Sincerely, John (Jack) de Yonge President
Joni Vanderburg	jsv888@yahoo.com	Hold West Point Wastewater Treatment Facility accountable. Many dollars will be lost if we let the beauty of this region turn to sh*t. Literally!
Kari Vigerstol	kugo2@hotmail.com	I appreciate you taking the time to read this and hope that you take the health of the Puget Sound into serious consideration when assessing the renewal of this permit.

Name	Email Address	Added Wording to Standard
Kevin Bodle	kjb_bop@yahoo.com	It's simple really, stop all the crap going into the water we say is our home here in WA. Even though the public in general don't know much about this process - do them right, as well as the other organisms we share the Sound with, as you are their representitives. Then you can tell the public what you've done and inform them more about our environment. All our needs will have to come from our local environment in the future - so keep it clean!
Kim Pendergrass	dream2know@comcast.net	Thank you for your time and consideration in the above request.
Krista Harris	movinmom@hotmail.com	PLEASE STRENGTHEN PROTECTIONS FOR PUGET SOUND BY UPDATING AND UPGRADING THE WEST POINT WASTEWATER TREATMENT FACILITY. IMPROVEMENTS IN PROTECTION ARE NEEDED. PUGET SOUND IS A PRECIOUS RESOURCE THAT NEEDS UPDATED RESEARCH AND LEGISLATIVE PROTECTION. THANK YOU FOR DOING WHAT IS BEST FOR PUGET SOUND AND FUTURE GENERATIONS FOR YEARS TO COME.
Lydia Heard	lydiaheard@hotmail.com	Although the West Point facility is a very clean and well maintained facility of its type, a plan and timeline must be developed for going to a tertiary treatment system. I agree with the following statements and urge action now.
Marcia Monma	marcia@monma.com	I live in a development with beach access to the Puget Sound. The Governor has a goal to clean up the sound and that especially means facilities like West Point! Sea life, whales, shell fish, eel grass, are all noticeably being effected by an increasingly polluted sound. We need to reverse the trend before it is too late. New & reissued permits with very much tightened constraints is the first place to start.
Marilynn Moch	MochCIHRI@aol.com	The time is past due to correct the injuries we continue to inflict on our natural environment. Costly though it will be, we must slow down and put our resources into saving ourselves, our health and our children.
Martha Taylor	denmarth@att.net	We have to do everything we can to improve the health of the Puget Sound. Our economy an quality of life depend on a health ecosystem in Puget Sound. West Point needs to be state of the art, with progress in reducing toxins released.
mary lassila	showbizmary@gmail.com	YOU HAVE GOT TO BE KIDDING...I JUST READ THAT SEATTLE IS BUILDING SO GREEN AND THEN ....NOW YOU DUMP INTO THE SOUND. SHAME ON YOU...WHAT ARE YOU THINKING...DO NOT DO THIS ANY MORE!
Michael Wauters	wautersm@gmail.com	From my address you will note I do not live on the Duwamish. However, I do work in South Park at Sea Mar Community Health Centers and for our patient's sake feel obligated to speak out.
Mike Conlan	mikeconlan@hotmail.com	All treatment facilities emptying into Puget Sound should be tertiary!

Name	Email Address	Added Wording to Standard
Mike Kaill	mkaill@rockisland.com	Dear Executive Ron Sims and Director Jay Manning, I am the operator of the Spring Street Aquarium in Friday Harbor. This year, I have noted a new problem, not seen in the 8 years that I have run the aquarium (that is supplied by sea water from Friday Harbor). Chemicals from storm water are poisoning (some lethally, some sub-lethally) the invertebrates in the aquarium. I have learned that our water treatment plant takes out most, but not all!, of these chemicals. In light of the new awareness of treatment-resistant pollutants in stormwater and wastewater, I implore you to take this opportunity to upgrade water treatment. Nearshore marine animals are getting hurt -- economically valuable ones, such as salmon, but also the other, less known, but still important members of the food web.
Nicole Coots	cootsadams@comcast.net	Dumping in our waterways hurts everyone. Please realize the damage that is being done THAT CANNOT BE UNDONE. Future generations deserve a clean world! Green thoughts, Nicole
Pat Collier	pcollier@scn.org	Loss of biodiversity is a major threat to human security. Millions of dollars are beiong spent for the Puget Sound Partnership Action Agenda to restore the health of Puget Sound. Decisions being made today will determine the Action Agenda?s success. The West Point Wastewater Treatment Facility - 30% of the Sound's sewage input - permit is a key example.
Peter Maier	pmaier@erda.net	Separate letter
Rhda Green	dolfin_j@hotmail.com	The waters in the Puget Sound aren?t getting cleaner in fact this year more areas were closed for shellfish and crab harvesting; fishing was low. We have to decrease the amount of foreign substances we put in the Sound. The concept of consumerism and recycle is something the public needs to work. Thanks for providing detailed information about what can go down the toilet such as no pet waste, of pharmaceuticals and telling us were to dispose of such items. The little news letter sent out with our bill should have hot items that we as users have an influence on. It is counter productive to write us how great the system is just to later read from other sources how it fails us. A more realistic truth is best. There are many things humans digest that are harmful to the environment that at your end needs to catch. What frightens me most is the storms and the systems overflow and raw sewage is released. The dilution is not a solution. As a scuba diver I have seen what pollution looks like below the surface. http://www.youtube.com/watch?v=kI6X2KwoHGM But you can see the layer of scum and debris that floats every day in front of the Seattle Aquarium. Although they clean it everyday the waters brings in a new batch. Ignorance is not bliss. Excuse and justifications don?t fix the problem it just allows it to get worse.
Richard Bergner	captainfidalgo@yahoo.cm	I live at Dewey Beach on Fidalgo Island near Deception Pass. What happens near Seattle impacts the water quality here.

Name	Email Address	Added Wording to Standard
Rory Henneck	rory.henneck@gmail.com	It is time to consider water reuse for much of this treated water instead of returning it to the Sound. Now is a good time to consider planning for purple pipe infrastructure.
Ruth Mulligan	rmulligan@earthministry.org	As a person of faith, and a member of the Eco-Justice Group at Saint Mark's Episcopal Cathedral, I want to encourage you to consider taking stronger measures to assure the cleanup of Puget Sound. Our group considers this effort to be crucial to our moral calling to care for God's creation. It can begin with the adoption of a revised West Point wastewater treatment permit.
Sandra Ray	sandra.ray@asu.edu	My name is Sandra Ray, and I am a conservation biology student about to graduate. I have been very active in the environmental non profit community here in Seattle, and was interested to hear about this permit renewal that is coming up for West Point. I am a staunch supporter of the Puget Sound Partnership and their Action Agenda to restore the health of Puget Sound by 2020, and yet decisions being made today will determine the Action Agenda's success. The West Point Wastewater Treatment Facility - 30% of the Sound's sewage input - permit is a key example. I would like to ask you to strengthen the permit by: a) Beginning the steps to upgrade from secondary to tertiary treatment, b) Addressing toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, c) Finding out if toxic chemicals are bioaccumulating and biomagnifying in organisms near the outfalls, and more. Due to the potential serious impacts the West Point facility has on Puget Sound, I request a public hearing to be held in January. I find it shocking that a decision of this nature might be allowed to be made behind closed doors, with no public input. I hope that you can respond to this request and let ALL concerned stakeholders, including the public, be involved in this process. Thank you for your time!
Shannon Donohue	smdonohue@comcast.net	As a proud resident of Georgetown who lives surrounded by pollution, I am deeply concerned about our stated green goals as a city and in King County and the direct conflict with the actions the government actually takes. Money is tight, budgets are in the deficient and unemployed is soaring. We can not, even in the face of these challenges, sell our future. Please follow the leadership of our new president and DO THE RIGHT THING.
Steve Bailey	steveslake@yahoo.com	Here in Bellingham, the damage done by the release untreated waste From Georgia Pacific all but sterilized the Whatcom Creek Waterway that empties into Bellingham Bay. Though recovery has been slow, the shutdown of the tissue mill has allowed the water quality to improve significantly. Let's continue to do whatever it takes to move the work forward.

Name	Email Address	Added Wording to Standard
Stuart Mork	morkabu@aim.com	PLEASE BEGIN THE PROCESS OF CLEANING PUGET SOUND, BY STRENGTHENING THE REQUIREMENTS OF THIS PERMIT.
Sue Gibbs	segibbs58@gmail.com	I have recently become very concerned about the health of our beautiful Puget Sound, including the Duwamish River. I went on a boat tour of the Duwamish last summer, and witnessed some of the pollution damage and some of the exciting efforts to restore the river. Renewing the permits for the CSO's seems to be a step backwards.
Susan Ward	barrettmw@msn.com	Dear Mr. Manning, I urge you to demand stronger standards for effluent released into the waters of Puget Sound. The 21st century requires more serious treatment of wastewater. Chemicals, toxins, hormones spell disaster for the Sound, and we must enact more intelligent standards for reducing, eliminating if possible, the ecological damage we do to the Salish Sea. Let's start with our largest city's sewage plant. Thank you, Susan Ward
Virginia Schaible	vschaib@hotmail.com	Dear Executive Ron Sims and Director Jay Manning, On Dec 1, the Puget Sound Partnership adopted the Action Agenda to restore the health of Puget Sound by 2020 and yet decisions being made today will determine the Action Agenda?s success. The West Point Wastewater Treatment Facility - 30% of the Sound's sewage input - permit is a key example. We ask you to strengthen the permit by: a) Beginning the steps to upgrade from secondary to tertiary treatment, b) Addressing toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, c) Finding out if toxic chemicals are bioaccumulating and biomagnifying in organisms near the outfalls, d) More aggressively reduce the toxic loading associated with combined sewer overflows., and more. Planning now for the future is essential, especially with the anticipated increase in population in the Puget Sound Basin. Virginia schaible 419 high st chestertown, MD 21620

Name	Email Address	Added Wording to Standard
Wanda Cucinotta	forestflor@aol.com	Dear Executive Ron Sims and Director Jay Manning, While we are all doing what we can to clean up Puget Sound, it is the upmost importance that you require large volume polluters to do their part as well. Please require all public and commercial wastewater and/or storm water facilities to do theirs as each permit comes up for renewal. We urge you to include stronger requirements for all waters entering Puget Sound. We urge you to require further restrictions and updated requirements for the West Point Wastewater Treatment Facility's permit renewal. During their permit renewal, please require the inclusion of a plan and timeline to upgrade to a mandatory tertiary treatment facility upgrade that addresses filtering toxic chemicals, pharmaceuticals and endocrine disrupters in both the facility and CSOs, require them to do a study to determine if these toxic chemicals are bioaccumulating and biomagnifying in organisms near their outfalls, require them to provide accessible facilities that accept products that pollute water so they are not dumped down drains and also require them to further educate their customers on what they each can do to limit these toxic chemicals from entering Puget Sound. We all need to do our part to protect Puget Sound. You need to do yours by requiring us to improve our facilities to prevent further pollution from entering the Sound. We have no hope of cleaning up the sound if we do not prevent these sources of pollution to continue. It's time to act now to include strong concise measures that will protect Puget Sound from degrading further. Please at the very minimum, allow public hearings on all permit renewals. Wanda Cucinotta, chair Lummi Island C.L.T. Watershed Enhancement Committee 2303 Tuttle Lane Lummi Island, WA 98262

Ecology's Response

Many comments were received showing strong support of protecting Puget Sound from further pollution. Ecology is working in several areas to understand and address the problems and challenges in returning Puget Sound to a healthy ecosystem. There is no single solution to solve the problems, but rather, a multitude of changes will be needed to turn the problems around. The permitting of point source discharges is an established and systematic way of controlling pollutant inputs, but point sources are only part of the problem. Ecology will continue to address reductions in pollutant discharges to the extent possible within the legal authority of the NPDES permitting process. We feel that some significant improvements will be made with the issuance of this new permit. We continue to look forward to gathering sufficient evidence to justify changes to our permitting that will result in improvements to the water quality of Puget Sound.

Comments from Peter Maier

From: "Peter Maier" <pmaier@erda.net>

To: <tmil461@ecy.wa.gov>

Cc: "lisa stiffler" <lisastiffler@seattlepi.com>,

"McClure, Robert" <RobertMcClure@seattlepi.com>,

"W Cornwall" <wcornwall@seattletimes.com>,

<ldickie@seattletimes.com>,

<people@pugetsound.org>

Subject: Comments: Draft NPDES Permit N0. WA-002918-1

Date: Sun, 14 Dec 2008 14:01:55 -0700

Attn: Kevin C. Fitzpatrick, Water Quality Manager. Northwest Regional Office, Washington State Department of Ecology.

Introduction:

Although I am not living in your state, I like to point out that you have an opportunity to show not only the USA, but the rest of the world, how communities should address their liquid waste problems. This is only possible if one is aware of one's history and willing to admit that mistakes have been made in the past. My comments deal with 1) sewage treatment, 2) CSO and 3) disinfection.

1. Sewage treatment.

History:

Although sewage treatment plants have been built for more than a century, the main purpose was to prevent nuisances caused by visual pollution and odors and while these goals were mostly achieved, sewage and even the 'treated' sewage was only around 1920 considered having a negative impact on rivers, due to depletion of dissolved oxygen concentrations. This resulted in research in England dealing with the oxygen sag in Rivers due to sewage discharges and prediction how long it would take before the river would have restored itself. The formula developed (Streeter-Phelps) needed a parameters that relates the pollution load with the oxygen depletion and this resulted in the BOD (Biochemical Oxygen Demand) test, which measures not only the activities of heterotrophic bacteria feeding on carbonaceous (fecal) waste, but also the activities of autotrophic bacteria using nitrogenous (urine and proteins) and convert ammonia into nitrates, better known as nitrification. Since the latter process only occurred 6 to 8 days after the test was initiated and the full length of the test was 30 days, the 5-day test reading was considered the C-BOD5, while the C-BOD30 would be 1.5 times the C-BOD5. The N-BOD (now called NOD) could be calculated by multiplying the TKN (Total Kjeldahl Nitrogen) test with 4.6 to achieve the

N-BOD. The total BOD exerted on a river is 1.5 x C-BOD5 + 4.6 x TKN. When the BOD5 of raw sewage is 200 mg/l and TKN 40 mg/l (as many assume), the total BOD would 1.5 x 200 + 4.6 x 40 =3D 484 mg/l.

The 5 day reading clearly was solely intended to be used as a time saver

When in the sixties governments adapted water pollution regulations and established treatment standards, many used solely the BOD5 test value representing the organic biodegradable waste in sewage and this world wide led to ignoring the pollution caused by nitrogenous (urine and protein waste), while this waste besides exerting an oxygen demand, like carbonaceous (fecal) waste, in all its forms is a fertilizer for algae and other aquatic plants. This is partly responsible for eutrophication of large water bodies and often results in dead zones.

Sewage treatment and the Clean Water Act of 1972:

Although the goal of the Clean Water Act is to eliminate all water pollution by 1985, EPA, by using the BOD test incorrectly for its NPDES permits, ignored all the pollution caused by nitrogenous (urine and protein) waste, as earlier explained. Since the test also does not differentiate between C-BOD and N-BOD, even during the first 5 days, it caused problems in the seventies and many sewage treatment plants were violating their secondary treatment discharge permits (exceeding 85% of 200 mg BOD5/l or BOD5 < 30 mg/l requirement), while most of the reading was N-BOD5, not required to be treated.

In 1983 EPA acknowledged the problems, but instead of correcting the test, it allowed the C-BOD5 (inhibited BOD5 test) and set a little bit stricter effluent standards (instead of < 30 BOD5 mg/l, it became <25 C-BOD5 mg/l), as in your present proposed NPDES discharge permit for the West Point Wastewater Treatment plant.

This inhibition is achieved by adding a chemical to the BOD5 test, which only kills those bacteria that oxidize ammonia. It was estimated that more than 60% of the sewage treatment plants, earlier considered out of compliance with the BOD5< 30 mg/l permit, got into compliance by adding a few cents of this chemical to their tests.

However, by allowing this test, EPA also officially ignored the pollution caused by nitrogenous (urine and protein) waste and reduced the goal of the CWA from 100% treatment (elimination of all pollution) to a measly (85% of 40%) 35% treatment. By using an administrative ruling, EPA basically lowered the goals (even the interim goal of swimmable and fishable water by 1983, provided you do not consider rivers used as urinals by cities to be swimmable) of the CWA without even informing Congress.

For years EPA has claimed that addressing nitrogenous waste would be too costly and would not yield enough benefits, while EPA's own data showed that better treatment was not only possible, but actually would be less expensive. In its 1992 National Water Quality Inventory Report to Congress, EPA also admits that pollution caused by nitrogenous waste (now called a nutrient) is the major problem for many open waters and partly responsible for the eutrophication, often resulting in dead zones, of many large water bodies, among them the Gulf of Mexico, Chesapeake Bay and the Puget Sound, just to name a few.

The incorrect use of the BOD test also has huge engineering consequences, especially the assumption that the BOD5 value of the raw sewage is the C-BOD5 value. This assumption is also not correct and much

of the incoming BOD5 can be already N-BOD. The Salt Lake City sewage treatment plant in 1983 was considered overloaded and the city had plans to expand the plant with a 125 million dollar expansion. The entire engineering study and design was based solely on BOD5 and TSS data, as required by the NPDES permit.

It was the same time that EPA acknowledged the problems with the test and Utah State's Science Council had recommended to the Governor, that the test should include nitrogen data. Even tough the Governor rejected his Council's recommendations; one city councilman insisted that the sewage treatment plant should be properly tested.

Reluctantly the City allowed this correct testing for one day, but that was already enough to show that the plant was under-loaded for the carbonaceous waste it was designed for, but instead received =

nitrogenous waste, it could not handle. Since the expansion again solely would have treated carbonaceous waste, it would have represented a 125 million dollar waste of public funds, while the rivers still would be used as a giant urinal.

Congress specifically demanded that the implementation of the CWA should be technology based, demanding BAT (Best Available Treatment) and not water quality based or treatment requirements based on the water quality of receiving waters. Congress considered such a program Congress open to local political manipulation and would defeat the purpose of the Act, which was to set uniform sewage treatment standards nationwide.

However, since it was impossible to evaluate the real performance of a sewage treatment plants, solely based on BOD5 and TSS (secondary treatment criteria) it was also impossible to establish BAT and that most cost benefit analysis developed for certain designs were solely based on meeting permit standards. If this information would have been available, it would have shown that not only much better sewage treatment is possible, but actually at a much lower cost.

2. Combined Sewage Overflows (CSO).

The history of sewage collection started with cities building sewers to clean their streets, as most life happened on the streets. Only when indoor plumbing became popular, this waste was connected to the existing sewers, which are now called combined (sewage and storm water) sewer systems. As rainwater was considered clean, many newer cities (at higher expense) installed separate systems one for sewage (sanitary sewers) and one for rain water (storm sewers). The sanitary sewers discharging into sewage treatment plants, while the storm water sewers discharged directly into streams and open waters. As now is acknowledged, storm water is not as clean as it was assumed and in many cities it is estimated that 10 to 20 % have cross connections of sanitary sewers connected to storm sewers or storm sewers connected to sanitary sewers.

Since sewage treatment plants treating combined sewer systems can not handle very large hydraulic loads, such systems have built in CSO's, (Combined Systems Overflow), which are calculated to be used only after a certain hydraulic flow in the sewers, often 3 to 5 times the daily flows. This in older systems may be more frequent, as the argument used to be that by the time this overflow occurs, the sewer systems have been cleaned by the clean (?) rain water.

The main reason against combined sewer systems is that conventional sewage treatment plants are designed for a hydraulic and pollution load condition, whereby excess hydraulic load affects the treatment, hence have to be kept to a certain maximum flow. This however, is not as critical with some system maintaining biological treatment processes that not only provide much better treatment but also are less sensitive to large hydraulic loadings.

Cities struggling now with combined sewer systems could move to the front of the line in showing the world how all the liquid waste problems of a city should be handled, while cities with separate systems may face high expenditures for having to treat their storm water separately, while they still need to improve their conventional sewage treatment plants, as they ignore the pollution caused by nitrogenous waste.

3. Disinfection.

When EPA in 1972 set effluent standards for coli form bacteria, many sewage treatment plants did install chlorination equipment as the easiest and cheapest form to meet this new requirement. However, since chlorine prior to any killing of bacteria, will react with other organic matter, it creates other forms of chlorinated organics. Especially THM's (TriHaloMethanes) increased in open waters and showed up in drinking water plants using surface water. Many of these chlorinated organics, now called DBP (Disinfection By Products) are considered carcinogens or endocrine disrupters and EPA in 1978 dropped its coli form requirement, also based on advise from the CDC and GAO claiming in their report to Congress that this requirement did not reduce any diseases caused by water born contamination, was a waste of money and actual harmful to the aquatic environment. While EPA dropped the requirement, it left it up to individual states to either stop or continue this requirement. The State of Illinois and some others did indeed drop the requirement and nothing has showed that the earlier positions of CDC and GAO were incorrect. In spite of that, many states still continue with this not only wasteful, but also environmental damaging practice

Conclusion:

It probably is incomprehensible for many to accept the fact that this second largest federally funded public works program failed due a worldwide incorrect applied water pollution test, but without correcting this test, we never will even come close in achieving any of the goals of the Clean water Act and we will keep violating many of the State's own water pollution control policies.

The copied paragraphs from a 1987 High Country News article explains why correcting this test is impossible. Also attached an essay with a list of different tests that have to be performed in order, not only to evaluate the real treatment performance of a sewage treatment plant, but also what the effluent pollution loadings is on receiving water bodies. This information is essential for any watershed TMDL (Total Maximum Daily Load) program, an attempt of the EPA to implement the CWA through the back door. Since this program represents a water quality based program to set treatment standards, it also is clear violation of the Act itself.

Recommendation:

Seattle is in a unique position to show other cities, actually the rest of the world that we can live in harmony with our environment, but that most of all requires that we are willing to learn from the mistakes made in the past.

Call me if you have any questions,

Regards,

Peter Maier, PhD, PE

44 Lakeview
Stansbury, UT 84074
Tel: (435) 882-5052
www.petermaier.net

CC:
People for Puget Sound
Seattle PI and Seattle Times.

THANKS TO THE CLEAN WATER ACT, THIS ENVIRONMENTAL-INDUSTRIAL COMPLEX HAS AN OPEN DOOR TO THE FEDERAL TREASURY.

With his attack on the BOD5 test and the design of sewage treatment plants, Maier broadened his critique from. Salt Lake City to the national clean-water program. Washington, D.C. water-lawyer Larry Silverman says that people at EPA headquarters tell him off the record that Maier is right, and that regulations and tests can and should be improved. But, they also tell him change is impossible because, Silverman says, "It would require the re-education of an entire industry." He adds that it might also require the re-tooling of an industry that is happy with the status quo.

Salt Lake City illustrates the industry's ability to resist change. According to Silverman, "In Salt Lake City, as in most of the country, there is a sewer lobby. They have a product to sell and they sold it. There are equipment manufacturers, engineers who designed it, construction companies that built it. They are all good citizens in the sense that they support the local politicians; they are well placed and highly organized."

Thanks to the huge sums allocated to sewage plant construction under the Clean Water Act, this environmental-industrial complex has an open door to the federal treasury. It also has a monopoly on the knowledge needed to evaluate the projects it proposes and builds.

The Nation has thrown massive resources at the water pollution problems since 1972, only to witness the 'relative failure of the regulatory and technical solutions it chose. The blame can be spread far and wide.

Brigham Young University's Professor LaVere Merritt, who was also on the Governor's Science Council committee that investigated the controversy, says Maier is a very important voice in the wilderness. "Peter

(Maier) may help move us towards a more rational approach in pollution control over time. He is a not-to-well received proponent of a valid point of view, one we will probably move to in the future".

For entire article, visit www.petermaier.net

(Note: a remaining portion of this letter, transmitted by email, was corrupted and not readable.)

Ecology's Response

Comments noted. In the above comments, it is unclear what the specific comments are in relation to the terms and conditions of the West Point WWTP and CSO System permit.